

**A PEOPLE'S RECOVERY:
THE JOPLIN TORNADO OF MAY 22, 2011**

**A RESEARCH PAPER
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DEDICATION:

To all survivors who know that they cannot do it on their own.

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ABSTRACT

RESEARCH PAPER: A People's Recovery: The Joplin Tornado of May 22, 2011

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This study documents the post-disaster recovery of survivors of the Joplin Tornado that occurred on May 22, 2011. Survivors acting in their own power to recreate their lives and manifest a new normal worked through various agencies, associations, and actors to rebuild and recover. Through surveys and interviews with a limited number of survivors, a recovery narrative was documented and categorized within the larger context of social capital studies to provide a greater understanding to the underlying social networks that survivors in disasters rely upon in times of great emergency and hazards. This research adds to the even larger discourse of post-disaster recovery and pre-disaster hazard planning that is going on in the world as man-made and natural disasters continue to happen with ever increasing frequency. Survivors in Joplin relied upon their social capital that was manifested in relationships with family, friends, and/or neighbors. To rebuild their lives, survivors relied upon local associations and connections to place them in larger social networks that could provide even greater assistance and aid after the disaster through job relationships, churches and other religious organizations, and/or local nonprofits in the Joplin area.

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Additionally, I would like to thank three very special church communities that provided me a home in which to articulate and work through my many issues that I carried with me after the tornado: College Heights Christian Church in Joplin, Missouri, Impact Christian Church in Merrillville, Indiana, and Camp LRCA in Crown Point, IN. You gave me a place to belong, at times lifted the burden I carried so I could focus on my research, and most importantly kindled in me the desire and opportunity to be part of something greater than myself to help heal this broken world. Thank you.

I ask for grace in the telling of these personal intricacies and stories, fragile as they are, of people's lives. Any first hand research is dependent on conditional judgment, examination, and personal subjectivity. This paper includes my own observations from living and working in this city for a few short years in my life. I did not turn over every stone and I did not check every story or timeline. What I present here is subject to my limitations, anything that is good from this paper comes from the survivors of the Joplin tornado. We are JOPLIN STRONG.

Chapter I -- Introduction and Background

On May 22nd, 2011 at 5:34 PM (CST) a funnel cloud formation began in southwest Missouri near the Kansas state border. At 5:41 this funnel cloud formation struck Joplin, Missouri as a multiple vortex EF-5 tornado. With speeds in excess of 200 miles-per-hour, the tornado created a path that was 22 miles long, maintaining a width of three-quarters to one mile throughout its journey across Joplin. The tornado devastated the central and southern portions of Joplin that afternoon, directly killing 159 people¹ and injuring over 1,000+ people (Letner. 2011, May 29; Simmons & Sutter, 2012, p. 2). It is estimated that there were approximately 15,000 people in the path of this EF-5 Tornado (Simmons & Sutter, 2012, p. 89). In the aftermath over 7,500 homes and 553 businesses were damaged or destroyed (Kennedy, 2013, April 23). The tornado displaced 9,200 people after the storm (Stammer, 2015). The estimated cost of the damage done by this storm was estimated to be over 3 billion dollars (Simmons & Sutter, 2012, p. 2).

I happened to be living there and had been off and on for six years up to that time. I would continue to live in Joplin for another four years after the tornado. Living in a city that is the subject to intense destruction begets questions; in the immediate aftermath there were very few questions on people's minds, mostly just, "How can I help?" "What can I do for you?" In the days that followed the destruction, more questions would usually follow, questions of "Are you okay?" "Were you affected?" "Who was affected?" and "Why did it happen?" and often enough "How could this happen?" It

¹ The City of Joplin adds two additional deaths that were after the storm but of related causality to this figure bringing the total count to 161.

was only in the months and years that followed, in piecing together the puzzle of Joplin's recovery, that the questions of "How did you recover?" and "Who helped you recover?" could begin to be answered. These last two questions are the focus of this work, asking survivors and the non-profit organizations and agencies that aided them "How they recovered?" I determined relatively soon after this disaster, thanks to some much needed prodding by advisors and mentors, that I should dedicate my final project to a storm that enveloped two entire cities, thousands of people, my friends, my loved ones, and even myself.

On a personal level I lost a small amount of material possessions to the winds and rains of this tornado, fortunately most of which I lost was easily and quickly replaced. The emotional turmoil, guilt, and anxiety that the storm created in me and left in its wake has continually been dealt with over the last past five years. My own recovery has been a whirlwind in and of itself, I cannot begin to tell every story of every survivor, nor can I document the entirety of the recovery efforts by the City of Joplin and the state and federal agencies tasked with its rebuilding. What I can do is tell the stories of a few survivors and their own personal agency in which they began to build their lives back together.

In recent years, many states have enacted legislation to mandate the creation of hazard mitigation plans. These are neither all-encompassing plans, nor do they address every possible disaster. Yet they are steps in the right direction, as we are not able to control disasters, we can help mitigate the effects of these disasters through. As someone who has worked on hazard mitigation plans and as worked in and among

disaster recoveries, it is my hope that no disasters strike, and the plans are never put to the test.

This paper is but a short glimpse into the back pages that make up hazard mitigation plans. These back pages are the stories, the interviews, and the surveys of the everyday people whose lives have been impacted by these disaster situations. This paper centers around the city of Joplin, Missouri, a mid-sized city located in Southwest Missouri. It was hit by a tornado in May, 2011. It has been over five years since that time, and the city has recovered greatly. In some measures Joplin is better than it has ever been. This paper is not about how tornadoes affect all cities nor is it about how city governments lead their cities to return to normal.

This paper is specifically about Joplin, and how the survivors of this disaster rebuilt their lives and what was involved in that recovery. Additionally, this paper brings to light several questions about a city's interaction with survivors after a disaster and creates some recommendations for further action into the lives of survivors following disasters. In between this I have reviewed many articles, publications, and books about disasters, tornadoes, disaster response, disaster recovery, and disaster planning. Additionally, due to the nature of my research, I have also examined some sociological content concerning certain aspects such as social capital and social vulnerability, concluding with their specific roles in disaster-related research. Included in this research is data from multiple interviews I had with survivors and a survey conducted with twenty different families who were victims of the destruction wrought by the tornado.

I spent my undergraduate college career in Joplin, Missouri, and I learned about this city by living there. I have seen many changes, even before the tornado, as the city revitalized its downtown and worked to continue to offer better and better amenities and services to its residents. No two cities are the same nor is the path of growth the same in any city, if there even is growth. No disaster is the same. The damage that is incurred, the method and means of destruction and especially the recovery from any disaster are different and unique to each incident.

This paper offers to shed some light into the people who survive disasters and how the field of community/urban planning can learn from these survivors in their struggles to overcome disaster. It also discusses how people's lives can thrive in the face of adversity as people rebuild and create a new normal.

The City of Joplin:

Joplin, Missouri is a medium-size town located in Southwest Missouri; the majority of the city lies the southwest corner of Jasper County with a smaller portion in the northern part of Newton County. The city was founded in 1873 after multiple small villages joined together. The city came about because of the lead and zinc mines that we developed there in the middle of the 19th century. These mines would create a Boomtown mentality that existed even into the 20th century. By World War II most of the mines had closed down, and Joplin began to transition into a medical, manufacturing, and trucking transportation based economy. Joplin is well known because of its place along Route 66 and its recognition was further galvanized when its name was included in the song about Route 66, "(Get your kicks on) Route 66."

According to the 2010 census, Joplin had 50,150 people living in it (Census, 2010). In the immediate aftermath of the tornado, we know that 9,600 people were displaced by the tornado. Obviously Joplin suffered from residential exit after the tornado at the city works relatively hard to ensure that people would either stay or come back probably the most well-known effort was the school corporation creating a policy that if you went to school in Joplin year before no matter where you live you can go to Joplin the following year (McKinney, 2011). The 2015 estimate for Joplin's population was 51,818 residents (American Factfinder, 2015). If that is the case Joplin was able to grow larger than the state it was in pre-tornado (Anselm, 2015). Population alone is not the only indicator for successful recovery, but it is a good indicator of how things are going for a city after disaster.

Before the tornado, the city of Joplin was known for very little outside of its listing in the aforementioned song about Route 66. After the tornado, however, Joplin became a city with the national spotlight shining upon it, as people from around the world came to help survivors and the city. One such example is of a survivor of the earthquakes in Japan in 2011 who came and volunteered in Joplin to help with the cleanup work in the summer of 2011 (Bierley, 2011). Even friends who I met living in Chicago years after the tornado told me about how they had gone to Joplin multiple times in the 2 years that followed to help survivors and to try to make a difference.

Nearly 200,000 people came officially, and by the city's estimate there were probably another 200,000 people who came to help without signing up or going through the official channels that had been created to manage the logistics of these volunteers through organizations like AmeriCorps. Even if only 200,000 people came to help

Joplin in the time that followed the tornado that would equal out to over four times the city's population, an approximate ratio of 4-to-1. I can't compare that number to any other city, but if it were not for the thousands and thousands of volunteers who came to the city and help, even in small ways such as raking glass out of people's grass and turf at their homes, Joplin would not be where it is today, five years after the tornado. It is because of this that I would say Joplin is a watershed moment for volunteerism in the United States and an example that should continue to be emulated both here and abroad.

The changes in the city from the tornado additionally affected the economic drivers in and around the city. There were over 540 businesses in the city affected by the tornado, from small mom-and-pop operations and storefronts all the way up to national chain retailers and employers. Most businesses built back, yet some chose to move on or to retire and be closed once and for all. A well-known local example is a restaurant located near the intersection of 20th Street and Rangeline Street called Pizza by Stout. They were known for their great pizza buffet and their very large craft beer selection. The tornado effectively wiped their facility off the map and the owners chose not to rebuild and reopen but to retire.

Many national chain retailers chose to rebuild relatively quickly, even during the ninety-day debris removal period when there was a moratorium on rebuilding for residential properties. Home Depot built a temporary tent store in their parking lot while they rebuilt their main store on the same site. Dillon's chose not to rebuild their supermarket and focused on only reopening their pharmacy portion in a smaller different location. The list for all the specific changes are vast and completely

unknowable in my limited capacity apart from working for the municipality's government. I include these well-known examples to demonstrate that there was rebuilding going on from commercial interests in addition to all the residents who were rebuilding their homes and their lives.

Another area of change that must be addressed is the positive image that was put on from the perspective of the city. The city leaders did not want Joplin to be forgotten or seen in a negative light as a place that was destroyed and will remain destroyed. They wanted to put “spin” on the city as a rebuilt place that was open for business and ready to grow. The city leaders did not wish the city to take on a “come help us” mentality, instead chose to make it a “come along and aid us as we go this way” story. Ultimately Joplin did not want to seem like Katrina where people were still waiting on help, months after the disaster. Joplin needed to be seen as a growing and healing city with an effective institution of governance that was providing critical support and guidance. For the most part this is a true story, at least to the rest of the country.

For most survivors though there was a lack of communication and interaction. The above concocted narrative is a false narrative of which most residents did not play an active part in, they were only the subject of the story—the city of Joplin was the narrator. In surveying survivors from many different backgrounds, I found that most did not participate in the public-input meetings that were being held throughout the city. Most of them did not even know about these meetings that were being held and the very few who did had no time to spare from all-consuming work of rebuilding their lives: going through rubble, clearing debris, rebuilding their homes or searching for new homes and all that entails.

Additionally, many survivors were living outside of the city during the first few months as they were few spaces available to them due to increased rent costs, properties being sold, and hotels being filled. It is difficult for the city as a whole to house all the people who formerly lived in over 9,000 homes within the city and the influx of thousands of volunteers who also needed immediate housing.

The tornado created opportunity for major design changes. Once debris was removed, there were in areas within the city that were essentially open blank canvases. This canvas-like approach though does not come without its own baggage, as it is a double edged sword in the community/urban planning field. Should businesses be able to rebuild before residents? Are they more important than survivors?

This paper does not answer these questions but in meeting with survivors and hearing their stories there was a perceived anger at the rebuilding process that residents were faced. There was a ninety-day moratorium on rebuilding for residential areas and many survivors after clearing out their salvageable goods abandoned what was left, especially in rental units which made up a majority of what was lost in the path of the tornado. Removing debris is important, but how can people rebuild their lives if they are literally prevented from rebuilding?

My Story:

I am a survivor of the Joplin tornado of May 22, 2011. I never really considered myself a victim as I was, fortunately, not in the path of destruction in the moments when the tornado passed through the city. I lost a lot of personal items in the devastation and really only reclaimed one item from all that was lost, a personal favorite hooded sweatshirt from high school. I know it is not necessarily important in the larger scale of

things, but it was a very sentimental item. Additionally, the tornado laid bare many personal issues in a long term romantic relationship that had been headed towards marriage for quite some time. After the tornado things actually got worse for me, and it took a few years for me to move through the emotional turmoil and baggage that the tornado helped create. My story is not sadder than other stories or of more importance in any way. It is just my story: about who I am, how I am a part of Joplin, and how the city and the tornado shaped me.

In addition to being in the city before, during, and after the tornado, I was hired on at the Harry S Truman Coordinating Council (HSTCC), the local Regional Planning Commission for the four farthest southwest counties in Missouri. The initial period of employment was for my internship, a required portion for my studies in urban planning at Ball State University. For over a month after the tornado, my colleagues and I met with survivors every day as a part of the Multi-Agency Resource Center (MARC) that was sponsored and maintained by FEMA and the Red Cross. Our main task, at least for HSTCC, was to help survivors who had lost their homes find and create long-term housing solutions.

Unfortunately, we were unable to help all applicants who requested assistance from HSTCC. Part of that reason was that our funding was severely limited and plagued with regulatory limitations. For our programs, many survivors did not qualify because of income limitations or duplication of benefits from sources of funding that we were tapping into. In addition to meeting the survivors at the MARC, our organization participated in daily and eventually weekly meetings with other members of the Long-Term Recovery Committee (LTRC). The long-term recovery committee was stood up

by the Jasper County Community Organizations Active in Disasters (COAD) to help supply unmet needs that survivors still had after receiving what help they did from FEMA, the Red Cross, and insurance policies (if they had any).

It was an exciting time in my life as I learned about the ins and outs of regional planning, disaster recovery, and working in committees. As the first few months at the Harry S Truman Coordinating Council came to a close, I began to move into other areas of regional planning. All of these contributed to my greater understanding, knowledge, and ability to be an urban or community planner. I would spend about eight months employed as an intern with the Harry S Truman Coordinating Council. As 2011 came to an end I packed up my bags and returned to Indiana to continue my education at Ball State University. Joplin will always hold a special place in my heart as it is the city where I essentially became an adult. It will always be more to me than just a city that a tornado went through. It is home to many people, many places, and many events in my life that made me who I am today.

Living in the city of Joplin off and on for approximately ten years exposed me to many different aspects and areas of Joplin: its citizens, structures, and interesting tidbits of history and life. Many of us mourned when we lost our discount movie theater years earlier or establishments like Pizza by Stout due to the tornado. We celebrated the triumphs of our town such as when Chipotle finally opened in the city or when we got a now defunct and bankrupt baseball team, the Joplin Blasters (Woodin & Payton, 2015). We have watched the city begin the process of transformation through the use of Community Development Block Grants (CDBG) and Neighborhood Stabilization Program (NSP) funding to redo parts of the historic downtown area of Joplin. When the

Missouri Department of Transportation (MODOT) rebuilt the Zora and Main Street intersection or when Joplin city engineers repurposed an old railroad into the Cardinal Greenway connecting multiple municipalities together via bike paths, we were there witnessing the transitions. However, sometimes we did not take all the changes as opportunities for growth or with a positive outlook. Many of my friends and I attended city council meetings, oftentimes with scorn about proposed changes and ideas that had strong effect on our everyday lives.

When the tornado passed through our city, carving a space that stretched for miles, many of citizens, myself included, wanted to be part of the discussion about how Joplin would come back. We wanted to share our primary motivators and desires for how our city could rebuild; we did not want Joplin to be the way it was. We wanted a future that was better than our past. We actively took part in this transformation, and I helped facilitate public input meetings working with residents to get their ideas heard for what they saw for Joplin--for what it could be.

The past six years at Ball State University, I have been exposed to a varied collection of urban, social, spatial, and planning principles and ideas. One of the most prominent voices is that of Dr. Nihal Perera, my advisor and a proponent of "People First Planning." Dr. Perera has instilled into his students a strong desire to cast off outsider etic approaches to planning, and approach all planning situations from a perspective of those that are being planned for. In my time under his tutelage, I have come to understand that there is not necessarily only one way to plan a place or a space whether from scratch as in a greenfield, or in a highly urban public space with constant and contested uses from different populations. With this view of planning, I

have spent time sitting with people trying to understand their desires and will for their own space or place. It is more than walking a mile in someone else's shoes (Umemoto, 2005), but it is also letting this person dictate where this mile leads. People First Planning approaches from an emic, or insider, perspective to lead to an understanding of what is functionality and purpose that may be inherent to this smaller system outside of the greater system that is the world.

The Struggle of Survival:

I would like to address a few things in this introduction that I think we can learn from disaster survivors who have rebuilt their lives. There is more to survivors' recovery than what appears in official city government and federal government documents. There is the everyday struggle of figuring out what to do next, of sorting through clothes and belongings, of finding a new place to live, and figuring out what's important.

In *Paradise Built in Hell*, Rebecca Solnit's (2009) talks about the liberating factor that disasters create in removing many or sometimes all responsibilities and manifesting new circumstances where people in creating a "new normal" shed parts of their lives that were no longer important to their current need for everyday survival and everyday provisions. In this creation of new normal, people generally came back up on their feet not from the actions of FEMA, the city, or even Red Cross, but through the tiny actions of their neighbors, friends, family members, work relationships, and connections or partnerships they had with local NGO's like churches or Habitat for Humanity.

Survivors usually received very little monetarily from Red Cross and FEMA, generally less than \$5,000. Yet from churches and Non-Governmental Organizations (NGOs) they received assistance and aid to rebuild their house, or money to purchase a

new car, or furniture to fill their home, temporarily or permanently. Some of this help was documented and tracked through the Long-term Recovery Committee, but much of it was not and it occurred via the organic relationships that people had with each other, helping one another.

These organic connections continue to reinforce the idea of disaster recovery that is manifested through social capital as opposed to a top-down disaster recovery that is entirely imaginative and completely removed from survivors' actual recovery. FEMA encourages and directs the recovery overall, which many in the disaster sphere know as "leading from behind." State and local governments usually direct how the recovery happens from a policy perspective, but all of this can be entirely removed from what happens on the ground, in the rubble and debris, or in people's lives. Municipal consultant, John Denny (2012), writes:

...FEMA leads from behind. Ultimately, it is the governors of the individual states who are in charge of disaster response, and they tell FEMA what they need, where they need it, and how quickly it has to be done. Yet it is FEMA that empowers the governors to lead, which is what leading from behind is all about — empowering others to lead.

For city planners and local government officials the most helpful thing to do is to prepare vulnerable neighborhoods located within a city's borders, connecting them with services, people, and agencies that can help lookout for them and aid them in times of need. This does not necessarily mean only those who are elderly, but could also include families/households that are below the poverty line or, even on a local level, families with small children or families/households with developmentally disabled members.

Preparedness, though not the main focus of this paper, has been cited before as the number one means to prevent major fallout and major damage/devastation in disasters. One of the cutting edge tools to aid in this is social vulnerability mapping that can then be overlaid with known hazards to help prepare households in preparing for disasters. Major natural disasters will never go away and according to some experts these will only continue to grow in frequency and, in most cases, damage. As an urban planning student, creating actually working disaster/hazard mitigation plans that incorporate known vulnerabilities will give governments and the agencies that aid them in disasters better working knowledge of the needs of people and the needs of the greater city or region that may continually remain unknown or unmet because survivors have not been adequately met with or their needs adequately explained and gathered by aid organizations.

The people of Joplin, from those who lost nothing to those who lost everything, took it upon themselves to rebuild the city the best they could. The Joplin-tornado disaster and its subsequent relief and recovery efforts became a lightning rod locally as the City of Joplin wanted to do everything it could to not let Joplin stagnate as they felt New Orleans had after Hurricane Katrina. It was said publicly by Mark Rohr (Woodin, 2013), the city manager at that time:

Our original goal was to minimize population loss as we had researched Greensburg (Kan.) and New Orleans and didn't want that to occur in Joplin. We have accomplished that goal," Rohr said in an email response to Globe questions. "Our focus has been shifted now to adding to our pre-storm population count within five years. The way we do that is through community enhancements, which will be the focus of our presentation at the next council meeting.

Up to that point the only tornado disasters of near comparison to Joplin were the tornadoes of April 2011 that struck throughout Northern Alabama. So without any other points of comparison, many felt Katrina was the disaster recovery effort of closest comparison.

In the years since, up until recently, Joplin became a model of recovery and was declared a success by FEMA as a way for future near total devastation cities to recover. FEMA Administrator Craig Fugate said this about his visit to Joplin right after the storm (FEMA, 2011, November 3):

The progress that we see being made here on the ground is remarkable, and a testament to the leadership and spirit of the people of Joplin," said Fugate. "It's proof of how effective a recovery can be when the entire team works together: federal, state, and local officials, the private sector, faith-based and volunteer groups and most importantly -- the public. Despite these enormous strides, there is still a lot of work to be done and we will continue to do whatever we can to support the community and its recovery, every step of the way.

As a survivor and a recovery worker I hope that the stories of the people of the Joplin tornado can help other communities and their citizens recover better from disasters; urban planners have much to learn about how individual people recover and how the relationships that people already have pre-disaster shape a city. "Scholarship on disasters and government decision makers have been slow to integrate this concept into its theoretical framework" (Aldrich, 2012, p. vii).

When survivors of the Joplin tornado began to pull themselves out of the wreckage, they did not wait for people to come tell them to start cleaning up and removing debris: They just did it. There was no systematic approach or systematized prior protocol that determined who would help who and who would do what. The

survivors started helping each other. In the future, local communities may be able to promote, encourage, and help sustain social capital for future disasters. This project, even in its minute nature, bears out that the survivors of Joplin largely recovered on their own through their own social capital, independent of larger governmental aid.

Chapter II -- Overview of Related Literature

The following section are definitions of certain terms such as disaster, tornado, response, recovery, resilience, and social capital, terms that make up the primary area of research in this paper. Lastly this portion of the paper will consider some of the larger aspects of disasters in the context of Urban Planning.

Disasters are happening with ever greater frequency around the world. How people and cities recovery from disasters shapes how we will prepare for, mitigate from, and respond to future devastation. Urban planning as a field of study and discipline must continue to advance disaster preparedness, response, and recovery for the sake of our very profession and for the lives we have responsibility to protect. This portion is to add to the greater understanding to urban planning and its connection to disaster recovery in Joplin from behind the scenes and the power of people in control and power. Lastly this section will also define certain terms such as disaster, tornado, response, recovery, resilience, and social capital, terms that make up the primary area of research in this paper. In researching this literature review it was demonstrated to me that what happened in Joplin, of people using their own power, ability, and social capital to rebuild, helping each other recover is not a limited and isolated occurrence. People helping each other is essentially what it means to be human, novelist Andy Weir wrote in *The Martian* (2014):

Why bother? Well, okay. I know the answer to that. Part of it may be what I represent: progress, science, and the interplanetary future we dreamed of for centuries. But really, they did it because every human being has a basic instinct to help each other. It might not seem that way sometimes, but it's true. If a hiker gets lost in the mountains, people will coordinate a search. If a train crashes, people line up to give blood. If an earthquake

levels a city, people all over the world will send emergency supplies. This is so fundamentally human that it's found in every culture without exception.

Urban Planning, Power, and Recovery:

Drawing upon the works of other more experienced writers to elucidate my work and help me better understand disasters and their nature and the larger picture by which we humans rebuild after disasters. I would like to establish the theoretical and contextual frames from which I am attempting to approach the Joplin disaster recovery efforts. The two primary lenses are through the work of Nabeel Hamdi (2004) author of *Small Change* and Bent Flyvbjerg (1998) author of *Rationality and Power*.

In *Small Change* (2004), the reader is challenged to look at the realistic actuality of planning alongside people in a form of mutualism that benefits all parties involved. This will be addressed later on as a possible direction for future post-disaster planning. In his short work, Hamdi stresses that policies alone devoid of the actual real world will not save people and in short will continually frustrate those who have to enact the policies on a world that is messy and muddy. Planning is not a science, nor is it an art per se. It is the place where both of these meet and in doing so create a space that allows for people to find their own emergence of self-identified community, that which is wholly theirs and in which they have highly active participation and buy-in. This right to self-determination and emergence into the affairs of greater governance is the crux of Hamdi's work. He seeks to bring planners and community activists to the same table and have "us" all work together to improve life. This relates to post-disaster recovery and planning in that it is critically important to allow survivors a voice in their own recovery, not just of their homes and lives, but of their greater community and city. For

a city is not only the built environment, but it is also the people, the relationships, the little intricacies of where does my garbage go, to who is my elected representative in city government, the daily patterns and habits of everyday life that people go about in their everyday lives.

In the history of humanity, humans have dealt with disasters in a myriad of ways since time immemorial. Whether it is by literally moving away from potential risks, blaming the gods and working to appease them, scapegoating certain peoples and working to alienate them away, or in our modern era of using technology and engineering to mitigate risk, humans have struggled so that the things that are important to us are protected from certain natural disaster risks. This is that natural disasters are as much a sociopolitical issue as they are a technological and mitigation issue (Steinberg, 2000, p. xxii). Yet if we realized that even in Joplin the tornado split through the middle of the city, there were those of both sides of the economic spectrum that were affected from the large houses on the west side of Joplin in Irongate to the smaller shotgun-like homes that made up the “grid” of inner Joplin which is bound between Rangeline and Main streets. What separates these survivors is how their needs were met, handled, and how they eventually able were to rebuild their lives and in some cases their homes.

In the book *Rationality and Power* by Bent Flyvbjerg, we are given a large glimpse into the planning and implementation process of a large city project in Aalborg, Denmark. Flyvbjerg weaves a narrative as he guides the reader through the story of Aalborg creating this project as power holders, citizens, and special interest groups who

wrestled with each other to bring to life the Aalborg Project. The project consisted of (Flyvbjerg, 1998, p. 4):

an award-winning scheme that later will be recommended by the Organization for Economic Cooperation and Development (OECD) as a model for international adoption on how to integrate environmental and social concerns into city politics and planning, including how to deal with the car in the city. The new approach will bring to halt Aalborg's passive accommodation to unceasing demands for more office space, shopping space, road space, and parking space, leaving little space for anything else--or so is the intention.

I think it is an excellent comparison to make between Aalborg and Joplin as two cities that have undergone massive planned changes, even if Joplin's initial cause for change was vastly different from Aalborg's. Whereas the city of Aalborg was in the midst of recreating its downtown after decades of incremental changes that had stripped people of the right to space in city, Joplin had the opportunity to recreate a massive swath of space in the city publically and privately. Both of these cities engaged in various planning processes designed to voice to the residents of each respective city. Additionally, both of these cities had their early initial plans run amok as various power holders and interest groups created massive impetus for change either in the plans themselves or in the execution and implementation of those plans.

Ultimately both the residents of Joplin and Aalborg asked themselves this simple question, "Is this what we want?" (Flyvbjerg 1998, p. 5). In Aalborg the initial plan was for a new bus transportation hub/terminal with hundreds of buses coming and going every day, along with a new civic center and a buses only corridor through the city. Comparably Joplin's initial plan from the hired Master Developer included a new civic center facility in which to house a cinema and a new library, that would be located in the heart of the tornado destruction. In borrowing aspects from Aalborg's story, external

consultants were brought in to justify certain aspects and create plans and memorandums for cooperation and as a base of knowledge of the requirements of the project. In Joplin the Citizens Advisory Recovery Team collected the culmination of ideas for the future of Joplin from their public input meetings. In the course of one year, the city began looking for a company or organization that could direct the rebuilding/replanning efforts as directed by city leaders. Eventually the city leaders chose Wallace Bajjali Development Partners, LLP. as the master developer for the city's new plan. Yet in many ways, the plan was actually Wallace Bajjali's in the first place, as they took ideas from Joplin, then created a plan based around some of the ideas of the CART committee.

The CART presented the culmination of their ideas for Joplin on November 7, 2011. This presentation called "Listening to Joplin" represented loose ideas about how Joplin should be rebuilt. The ideas were divided up into the following different sectors: "Schools and Community Facilities Sectors," "Infrastructure and Environment Sector," "Economic Development Sector," and "Housing and Neighborhoods Sector." Each of these sectors was then headed by different members who constituted those unique interests of each sector, such as members from the school corporation being part of the "Schools and Community Facilities Sector" or members of some of the large corporations in Joplin being part of the "Economic Development Sector". The CART presented their ideas such as an increase in greenspace throughout the city, more bike lanes, increased sidewalks, more public Wi-Fi, and a more streamlined development process for developers. Over time these ideas were added into Wallace Bajjali Master Development Plan, after Wallace Bajjali had been accepted as the Master

(re)Developer of the entire city. The CART had recommended Wallace Bajjali after accepting six different bids and interviewing four of the firms.

The actual hiring of the company took place after the city first sent a letter of intent to contract with Wallace Bajjali which was done by the city council. “Members of the Citizens Advisory Recovery Team will recommend the Wallace Bajjali Development Partners of Sugar Land, Texas, to help guide Joplin’s recovery from the 2011 tornado” (Woodin. 2012 Mar. 30). Joplin Globe reporter, Debby Woodin (2012, Apr. 2), stated in her article about the hiring of Wallace Bajjali:

Through the influence of the CART and other organizations Wallace Bajjali won out as the Master Developer. A step toward hiring a Texas real estate development firm as a master developer was taken by the City Council on Monday night, but not without dissension. A majority of the council, eight members, agreed to sign a letter of intent with Wallace Bajjali Development Partners, with one member abstaining from a vote. That abstention came from Councilman Benjamin Rosenberg, who criticized what he perceived as a lack of transparency in the selection. He also said the city manager should have imparted more information to the council. City Planner Troy Bolander introduced the proposal that gives the city staff the authorization to negotiate a contract for master planning services from the firm. He said a selection committee composed of representatives from the Citizens Advisory Recovery Team, the cities of Joplin and Duquesne, the City Council, the Joplin School District and others recommended the firm from a field of four finalists for the job. The firm also received the endorsement of the Joplin Urban Redevelopment Commission, he said.

Additionally, Woodin states in the same article about the dissension between one member of the city council voting and the rest of the council on hiring Wallace Bajjali.

Rosenberg asked: “Am I to accept the recommendation based on a leap of faith with another councilman’s recommendation?” Rosenberg said six firms applied for the appointment, but that the council had received information only on this one. The city manager said everything the council acts on is by recommendation of the city staff and others. He said the procedure was a public one. “This is a failure by you” to provide the council with details he thought were lacking, Rosenberg shot back at the manager, “and it’s not just this once but many times by you in the four

years I've served on council." Rohr replied that he felt comfortable staking his reputation on Wallace Bajjali.

Wallace Bajjali eventually released a plan encompassing many of the concerns that had been raised through the work of the CART. The plan consists of 19 projects that are worth \$794 million (Woodin. 2012, Jul. 9). Wallace Bajjali plans to use a combination of public and private funding sources to cover the cost of the projects, in addition to pocketing nearly 20% as profit. The plan is far from perfect and has been criticized for lack of attention and need given to low and medium income (LMI) residents of the city, especially those that were impacted by the tornado. Reporter Debby Woodin wrote:

Resident Bill Pate questioned whether the projects would serve Joplin's lowest income residents. He cited in particular a proposal to build a public library and movie theater complex on 20th Street. Pate believes that area could be out of reach for some of the library's current users. "I am a retired social worker. I have concerns about a population that is not well represented here. How will those people who go to the library to use the computers access it on 20th Street if they cannot afford to take the (city) trolley?" He said he was speaking of low-income residents who live on the north side of town. "If this whole thing works, are more and more people being priced out" of accessing Joplin's activities? Pate asked.

In creating a plan that would restore Joplin, the city leaders lost an opportunity to give equity to all residents affected by the tornado. There is a current lack of reaching out too many of the those affected and in some ways these residents will be entirely left behind in the redevelopment of Joplin. Under Wallace Bajjali's direction the city created a non-profit known as the Joplin Redevelopment Corp., which was given power to seize property even if already reconstructed or non-conforming to the new plan. In the course of reconstruction, the city waited an entire year to create their plan and hire Wallace Bajjali, during this time people already began to rebuild.

Another area of this redevelopment plan that has been controversial has been the creation of what is called a Super Tax Increment Financing District (Super TIF) in Missouri, an area of an already designated TIF district that has additional special financial tools placed on it. According to Woodin (2013. Jan. 18) “The Super TIF takes in the geographic footprint of the TIF district and there is a percentage of the state’s portion of sales tax — 50 percent — collected in that district that gets rebated back to the city,” said David Wallace, CEO of Wallace Bajjali Development Partners of Sugar Land, Texas, the city’s contracted master developer.” This specific TIF District will be called Stimulating Progress through Arts, Recreation and Knowledge of the Past (SPARK) and will consist of a museum, cultural district, and a possibly a library. Jane Cage the head of CART has written in a published op-ed (Cage. 2012. Dec. 12):

The tax increment financing district is at the front and center of that discussion right now. If we wait for the area encompassed by the TIF district to redevelop on its own, I am afraid our recovery will be much longer than any of us want it to be. We have had remarkable growth along the edges, but the central sector is noticeably vacant. Property owners are reluctant to rebuild because of uncertainty. Attracting investors will require incentives to develop the kind of anchor projects that can be the catalysts for recovery. I saw that concept at work firsthand in Waco, Texas, a community that was devastated by a tornado 50 years ago. A few really great key projects transformed a dormant downtown and gave private investors confidence to join in. Waco is becoming exactly the kind of place that Joplin citizens told the Citizens Advisory Recovery Team that they wanted—a vibrant city with amenities that we have never had.

The move is obviously not without controversy as it would siphon off taxes from this specific district to pay for the creation of the district instead of contributing to the city/state as a whole. It has been seen in TIF districts that other amenities suffer because the taxes needed to pay for amenities vanish. Over the course of 23 years this TIF district is supposed to provide over \$60 million that would be used to fund the actual building of this district, that is approximately \$17.5 million annually.

As mentioned elsewhere, Wallace Bajjali filed for bankruptcy and the city manager, who was willing to stake his reputation upon the firm, was fired. Lastly the Super TIF has become a burden on the city of Joplin and on the school district as it has siphoned away much needed funds from the general revenue of both entities. Within two years of creation, the TIF was already underperforming of its promises to generate new funding for development with its area. Then Joplin School District Superintendent CJ Huff is quoted saying:

Huff said the school district in 2012 agreed to the formation of a TIF district in order to advance the plan for redevelopment from the 2011 tornado. The problem created by the TIF district's capture of property taxes as well as sales taxes is that they deprive the school district of money needed to meet the costs of educating more students as enrollment grows, he said. "We have new kids and no dollars following those kids," Huff said of an increased enrollment he said the district is experiencing as houses are built and families move back into the tornado zone. "All of those tax monies are dollars we would use to pay operational costs," such as paying staff and buying materials for students, Huff said.

Those who have not been forced out of the city will benefit greatly from the increase in amenities and development that is supposed to take over Joplin in the near future. In time more and more information will come out about the actors in the redevelopment of Joplin and exactly how each actor acted in accordance to power and rationality.

Disaster:

It is important to define what a disaster is because this allows us to define the context in which this project exists. As a survivor and as a disaster recovery worker, understanding the context of the disaster and the meaning of the disaster allows for lessons to be learned and to be transferred into new and potential future hazards and

disasters. Anthony Oliver-Smith (1999), citing Ludwig Wittgenstein (Wittgenstein, 1973, p. 32), in Oliver-Smith's chapter of *The Angry Earth* (p. 20) says:

Wittgenstein counsels us regarding the linguistic difficulty of absolute precision, particularly when dealing with categories that encompass widely ranging phenomena. For such categories or concepts, he suggests using the term "family resemblances." Following his discussion of the concept of games I suggest that disasters form a family, in that what emerges from a consideration of their wide array of phenomena is "a complicated network of similarities, overlapping and crisscrossing: sometimes overall similarities, sometimes similarities of detail." Wittgenstein employs the metaphor of a spinning thread in which there is a continuous overlapping of fiber upon fiber, but no fiber that runs for the entire thread. The common feature thread as well as--to extend the metaphor--its strength, lies in the continuous overlapping the filaments through the whole strand. Furthermore, there is no need to establish definitional criteria limits to make such a set of family resemblances usable as a concept. This is not to say boundaries cannot be drawn, as they are from the area for special purposes, but boundaries are not necessary to make the concept usable except that special purpose.

To use Oliver-Smith's words a "disaster is a contested concept, with 'blurred edges,' more a set of family resemblances among a wide array of physical and social events and processes rather than a set of bound phenomena to be strictly defined" (Oliver-Smith, 1999, p. 21).

In a desire to create a working definition for our use in this paper, I will draw upon Aldrich's definition which is built upon Fischer's work on the sociological implications of disasters. Simply put, "disasters refer to collective events that--at least temporarily, and often for years afterward--suspend normal daily life routines owing to widespread damage" (Fischer, 1998, p. 3 cited in Aldrich, 2012, p. 2;). Aldrich goes on to state that a disaster,

is an event that suspends normal activities and threatens or causes severe, community wide damage. Such events take lives, destroy homes

and businesses, disrupt the standard flow of goods and services, put standard operating procedures on hold, and damage critical infrastructure” (Aldrich, 2012, p. 3).

In this sense, it may be easier to define a disaster by what it does rather than by what it is:

[D]isasters take a people back to fundamentals. In their turmoil, disassembly, and reorganization, explore essential rules of action, bare-bones of behavior, the roots of institutions, and the basic framework of organizations. They dissolve superfluous embellishment and dismantle unfounded or casual alliance. They erase the polish of recent development. (Oliver-Smith, 1999, p. 11).

Disasters are more than nature’s harm towards and through the environment. The impacts are socially constructed too. Oliver-Smith goes on to write,

Implicit in my approach is the assumption that disasters are as deeply embedded in the social structure and culture of the society as they are in an environment. In a sense, disaster is simply the medic of the condition of the society’s total adaptational strategy within its social, economic, modified, and built environments” (Oliver-Smith, 1999, p. 25).

This adaptational strategy begins to land near what is defined as “resilience” by Aldrich in which he applies the biological/sociological definition in that it is “the ability to jump back, or return from disturbance to equilibrium” or internal harmony (Aldrich, 2012, p. 7). I want to note how in disaster studies everything is related each other. There is no isolated term that can be removed from the collective as each is built upon the others, much like the thread illustration from Wittgenstein mentioned above. Oliver-Smith, writes that "disasters disrupt routine life, stabilize social structures and adaptations, and endanger worldviews and systems of meaning” (Oliver-Smith, 1999, p. 23).

The Joplin-tornado event is a disaster that is easily and explicitly made clear in at least four areas that my research bears out: physical destruction, emotional turmoil,

urban and ecological devastation, and loss of life. These categories could be combined into much broader terms, such as built environment, ecological environment, and society. My time studying urban planning has given me a strong desire to look at people first: how events, plans, strategies, happen and affect people. In this paper, I realize that as much as I would like to use a people-first perspective, I must examine the larger picture too.

Although we may never be able to explain why this particular tornado struck Joplin with such intensity outside of the atmospheric conditions that presented themselves on May 22, 2011, we can determine if there are ways to prevent the hazards of future tornadoes and their effects on the built environment, ecological environment, and the people of communities experiencing them. It could be argued that much of the destruction attributed to the tornado could have been prevented with better building practices mandated to all new and existing structures in the city. Additionally, the loss of life that happened in the tornado could have been prevented with better access to public and private tornado shelters and tornado-proof building materials.

Oliver-Smith (1999, p. 27) writes,

by separating hazard from disaster we disengage society from the physical world in which both are constituted. The why is implicit in every disaster because disasters either do not occur or are not severe if a community is successfully adapted to its environment. Occurrence and severity of disaster are one measure by which we can judge the success of adaptation to the environment.

I think it is important to note that if Joplin had better adaptability and had prepared for the hazards of a tornado event, there would have been less destruction and devastation overall. Joplin is not unique in this. Most cities, towns, municipalities, and even ordinary everyday people's homes, especially in the Midwest, are not

adequately prepared for the hazards that a tornado presents. Yet just because Joplin is in the Midwest and did not have comprehensive preventative measures instituted in the city, did not mean it would get hit with a tornado.

There is not a cause and effect correlation here. Cities have “patterns of vulnerability.” Oliver-Smith again writes (1999, p. 29),

A disaster is made inevitable by the historically produced pattern of vulnerability, evidence in the location, infrastructure, sociopolitical structure, production patterns, and ideology, that characterizes a society. The pattern of vulnerability will condition the behavior of individuals and organizations...

Many Americans live in places where there are atmospheric weather risks, how they prepare for them determines how great the magnitude of a disaster will be. Cities in the United States, have patterns of vulnerability that largely depend on the many-faceted desires of power holders in specific contexts. If power-holders do not consider something to be important, then it is not important for the rest of the non-power holders. Oliver-Smith states (1999, p. 29), “The fact that complex societies, as adaptive systems, are controlled by contesting interests within a society, privileging some sectors with enhanced security while subjecting others to systemic risks and hazards...”

Residents must create situations in which society, its urban footprint, its ecological environment, and the sociopolitical sphere of power, all are taken into account when assessing risk and preparing for disasters and are part of the creation of an understanding of “patterns of vulnerability and response to disaster.” (Oliver-Smith, 1999, p. 30). For we know that disasters happen, and based on certain factors, people and their societies and cities are at more or less risk dependent on time. Eventually a disaster will strike.

Many individuals in Joplin who could afford to build or purchase tornado shelters did so after the tornado for their private residences. Unfortunately, this is not feasible for everyone who lives in Joplin and for that matter in the Midwest. The city of Joplin at the time did not require foundational tiedowns or anchoring techniques for housing structures nor was there widespread access to tornado shelters for residents. The residents are to blame for not pushing for local legislation that would have made protection of life and property a larger policy for disaster preparedness. No one wants to think of such possibilities outside of emergency management workers. The residents, myself included, did not want to believe that a tornado of the magnitude of May 22, 2011 event could happen, and that belief permeated all people through all walks of life. Additionally, these changes and retrofits for most Joplin residents were and continue to still be outside of their personal ability to afford. Later on in this paper I will address how residents respond to these issues through a form of mutuality and desire to care for their neighbors.

Tornados:

The swirling chaos that is a tornado is the collision of multiple weather forces that just so happen to exist in near perfection in the continental United States. It takes cool dry air coming down from the Rocky Mountains and warm moist air coming up from the Gulf of Mexico to create the beginning of the weather phenomenon that makes a severe thunderstorm that can lead to a tornado. Tornadoes form out of supercells that are in thunderstorms as offshoots of hyperactive clouds that begin to tower over areas. These eventually turn into hook echoes when can be viewed on screen through radar (Smith, 2012, p. 9).

The National Weather Service issued an update concerning Joplin at 1:30 pm, on May 22, 2011, that the area was under a tornado watch, which “means general conditions are right for the development of thunderstorms that could produce a tornado, as well as large hail and damaging winds” (Smith, 2012, p. 6). In contrast a tornado warning is issued when an actual tornado has been sighted and is on the ground. When a tornado warning is issued for an area, as expected, the emergency management workers sounded tornado sirens (Stammer, 2015).

Joplin’s tornado sirens went off twice after the 5 o’clock hour that afternoon on May 22. The first sirens went off at 5:14 pm; the sirens went off for a second time at 5:38 pm, due to two storm chasers hailing a police car and getting on the police radio to request a siren as they had chased the tornado from Kansas into the Joplin area (Smith, 2012, p. 23). The time in between the two sirens created a state of confusion for citizens as many thought this was a “cry for wolf scenario” and in speaking with many survivors, they took little heed of the tornado sirens.

The general consensus of many Joplin residents is that the sirens are usually false alarms so why even bother. This is an actual issue in Joplin. At least up until the period before the tornado of 2011, the city/county policy was to sound the “sirens both for tornado warnings and for severe thunderstorm warnings when high winds were expected” (Smith, 2012, p. 12). It cannot statistically be determined whether the high frequency of storm sirens which created a false sense of no danger resulted in the unusually high number of deaths that happened with the Joplin tornado, but it cannot be ruled out as a factor.

Creating a knowledgeable and aware population is critical to promoting safety from extreme weather hazards. The Department of Homeland Security has created a National Preparedness Month program. "September is recognized as National Preparedness Month (NPM) which serves as a reminder that we all must take action to prepare, now and throughout the year, for the types of emergencies that could affect us where we live, work, and also where we visit" (National Preparedness Month, DHS)

The Joplin tornado was an EF-5 tornado on the Enhanced Fujita scale which is the follow up to the original Fujita Scale. "The F-scale was developed by Professor Theodore Fujita in 1972 and adopted by the NWS (National Weather Service) in 1973. The scale rates tornado damage on a six-point scale from 0 to 5, with 0 representing minimal damage and 5 "inconceivable" damage" (Simmons & Sutter, 2011, p.14). The scale was upgraded in 2005 to the Enhanced Fujita scale, "maintaining the 0 to 5 rating for tornadoes, and the numerical categories are intended to be consistent with the earlier F-scale ratings" (Simmons & Sutter, 2011, p.14).

Even though the Fujita scale system is based on wind speed, the way that the scale is observed is usually after the event/tornado by studying damage done by the tornado in and along its path. From 1950 up until 2007, only 6% of tornadoes that struck in the United States were above a rating of "3" on the Fujita system, yet these 6% of tornadoes "account for almost half of the damage area done" (Simmons & Sutter, 2011, p.15).

The 2011 tornado season was extremely unique when considering that tornadoes for the past thirty years, from 1980-2010, had not killed more than forty

people per year. The tornado season of 2011 claimed over 550 lives (Simmons & Sutter, 2012, p.xiv). These two economists go on to state in their analysis of the 2011 tornado season:

The tornado that hit Joplin, Missouri on May 22 caused 159 direct deaths and additional indirect fatalities, making it the deadliest individual tornado in the United States since 1947. A pair of Alabama tornadoes on April 27 killed 72 and 64 people, ranking them as the next two deadliest tornadoes in the United States since 1957. With 316 fatalities, April 27, 2011 tied with March 21, 1932 as the second deadliest day of tornadoes, trailing only March 18, 1925--the day the infamous Tri-State tornado killed 695 Americans (Simmons & Sutter, 2012, p.xiii).

The tornadoes of 2011 which included the Joplin tornado further the case that the long-term recovery from tornadoes must take a long view of the future to prevent the travesty and devastation that disasters, including tornadoes, can cause communities and their residents. It is of the utmost importance that we consider citizens as an essential part of the preparedness, response, recovery, and mitigation to and from all hazardous disasters.

Disaster Response:

Disaster response, in the simplest form is “the immediate post-impact period where survivors must confront their new reality” (Fischer, 2008, p.16). It involves the actions and aid provided to assist survivors and the emergency responders who carry out these. It is in this period when search and rescue is initiated, infrastructure for utilities begins to be repaired to bring residents back to “normal” living, and debris removal is planned and started. “Emergency organizations respond and attempt to coordinate the community response to disaster. State and federal (FEMA) agencies...

initiate their support” (Fischer, 2008, p.16). Fischer goes on to describe what the response level is composed of (p. 17):

A proper response would include emergency operating center (EOC) coordination of the information flow during the response and emergency organization response to needs of the community (such as evacuation, debris clearance, restoration of services, medical assistance...)

I was able to interview Keith Stammer, City of Joplin’s Emergency Manager. In this interview I was able gain an understanding of the immediate actions taken by those in Joplin tasked with handling crises. He stated that his primary responsibility included three areas: People, Scene Management, and Property Preservation. The people area of responsibility is generally seen as search and rescue. The scene management is much of the early debris removal generally focused on clearing roadways and rebuilding essential utility services. The last goal area is property preservation, which is mostly setting up a perimeter around the disaster area and protecting against looters and other ne'er-do-wells that want to capitalize on the situation created by a disaster.

As an emergency manager, he said his job was to “match resources to needs and coordinate those working in the disaster.”

We didn't do anything differently than what we have done before, except we had to spool up size wise. So beforehand where we worked with a dozen different response agencies, this was 435 different response agencies. We might have had 10,000 to 15,000 registered volunteers (aiding in other previous disasters in the area). This time we had 175,000 registered volunteers. First we had to understand what happened to us in terms of the scale, then we had to come up to speed rapidly to handle that.

There were over 3,000,000 cubic yards of debris that that was removed from the city of Joplin. The city ran search and rescue operations to the following Friday after the tornado. The last survivor found alive was on Tuesday afternoon.

His words were as the Emergency Manager for Joplin (Stammer, 2015):

...as soon as the tornado hit, my job was to run the EOC, which is what I did. What that is as we set up and stood up the incident command system format (which includes:) operations, planning, logistics, finance and admin, public information, safety. Our job is to support what goes on in the field, so they go out and they do search and rescue and call back and say, "we need more equipment, we need more people, we need food, we need port-a-potties, we need a helicopter, we need a place to park all of our equipment, we need facemasks, or whatever." When the politicians come down from the state and federal side of things, our job is to interface with them, give them tours and people. Thence to also coordinate between other cities and other states as well on any other efforts. All we do is basically support what's going on out there in the field.

Disaster response is about understanding the disaster and coordinating the efforts of those who work to help survivors in the immediate aftermath of a disaster. This is not necessarily the focus of this paper, but it is important to discuss and define when considering the entirety of the Joplin tornado as recovery follows response in disaster management.

Recovery:

When the response stage of a disaster ends, the recovery stage begins; this operation usually occurs within six weeks of the initial disaster. Recovery as a field has many different definitions, the most common of which is "a return to the way things were before the disaster." This definition is rather lacking when considering the whole story of a disaster. Aldrich states that restoring back to pre-disaster levels is an impossible metric with which to define recovery communities nor for that matter recovery which "is not a static point or a single moment in time: it is an extended process" (Aldrich, 2012, p. 5). He goes on to state that the problem is that today's "common approaches to

disaster recovery still remain rooted in a 1950s paradigm of physical infrastructure, focusing on the rebuilding of bridges, power lines, homes, roads, and shops... Alone it will not contribute to long-term resilience in communities" (Aldrich, 2012, p. ix).

Lawrence Vale and Thomas Campanella write in their introduction to disaster resilience (Vale & Campanella, 2000, p.12):

Is it sufficient to say that a city has recovered when its aggregate population returns to pre-disaster levels? In some cases, where the toll of death and displacement has been high, the numerical resilience of the population may be a reasonable proxy for recovery. For cities that have lost huge percentages of their populations, the restoration of the city as a place of habitation is itself a signal achievement. Others will judge recovery through different sorts of mindsets, conditioned by both professional training and by personal attachment to places and people. Economists will look toward restoration of economic activity; transportation planners will seek measures of local and regional traffic flows; designers will look for the healing of streetscapes and the advent of new buildings and memorials; psychologists, clergy, and schoolteachers will make assessments of emotional well-being. Those who can resist such professional frames will view recovery as an ongoing search for a "new normal." The process of post-disaster recovery is a window into the power structure of the society that has been stricken. Understanding the meaning of urban disasters therefore entails more than examining the various institutions every society sets up to manage recovery... What we call "recovery" is also driven by value-laden questions about equity. Who sets the priorities for the recovering communities? How are the needs of low income residents valued in relation to the pressing claims of disrupted businesses? Who decides what will be rebuilt where, and which voices carry forth the dominant narratives that interpret what transpires? Who gets displaced when new facilities are constructed in the name of recovery? What roles do nonlocal agencies, national disaster-assistance policies, and international relief organizations have in setting guidelines for reconstruction? How can urban leaders overcome the lingering stigma inflicted in their cities victimization? What place is there for visionary architecture and long-range planning?

The United States Federal government through the Federal Emergency Management Agency (FEMA) has in recent years made a concerted effort to redefine recovery in broader strokes than just returning a community back to its state before the disaster. Recovery is seen as a process or continuum of action:

The recovery mission area defines capabilities necessary for communities affected or threatened by any incident to rebuild infrastructure systems, provide adequate, accessible interim and long-term housing that meets the needs of all survivors, revitalize health systems (including behavioral health) and social and community services, promote economic development, and restore natural and cultural resources” (National Disaster Recovery Framework, 2016, p. 23).

Additionally, one of the biggest points later addressed in this framework is that after disasters FEMA wants communities to direct how they want their communities to come back, “Post-disaster recovery is a locally driven process...” (National Disaster Recovery Framework, 2016, p. 23). FEMA no longer sees recovery from a single framework or lens; recovery is dictated by eight guiding principles that determine what “successful recovery” is and for whom it benefits. FEMA is actively working to redefine and reshape recovery so that it is not stuck in a paradigm that cares only for infrastructure and buildings and nothing for survivors. This has yet to be seen, but as for now FEMA is actively working to correct the way disaster recovery has been done in the past and create new methods of recovery that are whole community focused.

Resilience:

When disasters strike municipalities, the ability for these communities to “come back” and recover is a measurement of the community’s resilience. According to the RAND Corporation, community resilience is a measure of the sustained ability of a community to utilize available resources to respond to, withstand, and recover from adverse situations (RAND Corp. Website on Community Resilience). Daniel Aldrich in his 2011 paper, simply states that resilience is, “the ability to recover from trauma and crisis” (Aldrich 2011, p. 7). It “is the ability to jump back, return from disturbance to

equilibrium or internal harmony” (Aldrich, 2012, p. 7). He extrapolates this further in his book *Building Resilience* defining

resilience at the communal, not individual, level, focusing on the ability of a neighborhood, ward, or area to engage in positive, networked adaptation after crisis. Resilience is a neighborhood's capacity to whether crises such as disasters and engage in effective and efficient recovery through coordinated efforts and cooperative activities. Neighborhoods demonstrating less resilience failed to mobilize collectively and often must wait for recovery guidance and assistance from private or public sectors... (Aldrich, 2012, p. 7).

In regard to Joplin and its recovery one could make the case that Joplin was in an excellent state of resilience before the tornado. Vale and Campanella (2005, p. 335)

define resilience as:

On one level, urban resilience implies a physical capacity to bounce back from a significant obstacle, much like a rubber ball dropped on the pavement. But cities are not rubber balls, nor is a disaster like an asphalt plane, from which a rebound can be definitively predicated by a set of mathematical equations.

Social Capital:

When I first started, this project was mostly concerned with trying to understand people's recovery. I was not fully aware of the larger sociological aspects that had come to dominate recovery in recent years. After starting my research, it became relatively apparent that my results were corroborated by a much larger body of research that has been going on for the last 15 or so years. This body of research is about social capital in relation to disasters.

Social capital is the relationships that you already share with the people and local institutions around them. To use the proverbial situation, to whom would you go ask for cup of sugar, is to describe the relationships within social capital. It asks us what are the

closest relationships that we can rely on in times of desperation and need. That is a relatively simplistic understanding of social capital, but for this project, it will be a working definition. Quoting Nan Lin (2008, p. 51), Aldridge states that social capital, “is composed of the resources embedded in one’s social network” (Aldrich, 2012, p.13).

Aldrich goes on to say that social capital provides,

social resources (that) can assist in recovery by serving as informal insurance after a disaster, overcoming collective action problems that stymie recovery and rehabilitation, and strengthening ‘voice’ and decreasing the probability of ‘exit’ (Aldrich, 2012, p. 14).

In Joplin the use of Social Capital became apparent as the speed and intensity of people’s response to the tornado continued past the first few weeks and the long term recovery began.

Chapter III -- Methodology

My involvement in Joplin, after the tornado was very different than traditional methodologies for graduate studies. I lived, ate, breathed, walked, worked, drove, struggled, failed and succeeded in Joplin. Joplin is a part of who I am, and it will continue to be a part of my very existence for the rest of my life. My approach to this methodology is based primarily on the following six areas.

1. Literature review
2. Surveys of survivors
3. Extended Interviews with survivors
4. Extended Interviews with representatives from agencies and organizations that were engaged in post-tornado work in Joplin
5. Lived-in experience: My own (personal) experiences living in Joplin before and after the tornado
6. My professional experiences working in post-disaster Joplin and other disasters

As I have discussed literature review in the previous section, I will move on to section two.

Surveys of Survivors:

My desire for People-First Planning after the tornado led me sit with many survivors over the past five years listening to their stories. I listened to how they were

affected, what they lost, how they recovered, and how they could be helped or encouraged along on their own terms and in their own way. As I began to build my own formulations based on the “data” that I was gathering, I created two different surveys to gather statistics and information about the survivors and the recovery process. In compliance with Ball State University’s Internal Review Board standards these statistics do not reveal personal identifying information. After the first survey of many survivors, I realized that it was not gathering enough information related to survivors’ personal recoveries, particularly related to the aid they received and their use of agency in the recovery. Returned to the drawing board, I edited the primary survey and received additional IRB approval.² The questions for this survey were aimed at determining who helped survivors recover from the tornado. Additionally, the questions were targeted at discerning the involvement of survivors with the city’s plans, plan implementation, and the city’s overall recovery. I was interested in knowing if survivors were attending the public input meetings that the city sponsored across town.

I used a variety of ways to find my diverse subject group, I called people, friends of friends, and other people whose names were given to me to as survey participants. I walked the streets of Joplin going door-to-door like a travelling salesman asking people if they were survivors of the tornado and if they would be interested in helping in a graduate study about survivors. Lastly I surveyed close personal friends who had suffered from the tornado, gathering information about their own recoveries to complete my surveys for this paper. In all, I surveyed twenty families or households, primarily in the summer of 2015, four years after the tornado.

² Both sets of survey questions are located in the Appendix 1.

The results of the surveys and interviews that I was able to conduct during the time that I lived in Joplin give insight into survivors and their lives after the storm. They are not all-inclusive nor are they the penultimate source of information, but they do help give us a glimpse into the lives of everyday people, everyday residents who were trying to rebuild their lives. In many cases the rebuilding of the victims' lives was slow and unfortunately not as thorough as many would hope. There was the expectation that FEMA's arrival would "fix" everything and unfortunately the rebuilding for most survivors is a long process. The crux of these surveys was to determine people's post-disaster recovery transformation. I wanted to know if people were signing up for FEMA and if people were signing up for the Red Cross or if they were not. Outside of FEMA and the Red Cross I wanted to know if people were receiving aid from other organizations like those that belonged to the long term recovery committee.

One of the many constantly-heard statements of survivors in Joplin was that they did not need help. Often times a survivor would say to someone representing FEMA or the Red Cross that they do not need help and to talk to her/his neighbor who was worse off. It is rather unusual and relatively striking when compared to other disasters that have occurred in the United States. But it does demonstrate a can-do attitude and a strong desire for survivors to pick themselves up by their own bootstraps. I am not implying that survivors only relied upon their own power and strength ability and resources but also upon the abilities and resources of their neighbors, friends, and family. This is a manifestation of social capital that will be expanded up on in the "General Discussion" section. Additionally, I was curious to know if there were survivors

who had the experience of running into barriers and walls from decisions the city had made.

Another major area that I was curious to know about was survivors and their ability to be part of the public input meetings that the city was conducting. I wanted to know if survivors even knew about what the CART was doing for the residents of the city on behalf them and of larger partners. Through the long term community recovery committee set up by a coalition of local community leaders led by FEMA, an organization called the Citizens Advisory Recovery Team (CART) was established. The vision of the CART was that, "Joplin will set the standard for disaster recovery by demonstrating to America it's a can-do attitude. We will be recognized as a city that encourages green alternatives and healthy lifestyles. Through faith and hard work we will be known for our vibrant business community, our commitment to innovative education and neighborhoods that meet the needs of all of our citizens" (Cage, 2011, CART). I was keenly interested to know if survivors had time, willingness, and a shared vision for what the CART was doing.

Extended Interviews with Survivors:

In the immediate aftermath of the tornado, I was part of the Long Term Recovery Committee and was regularly meeting with survivors to help find them solutions to their long term housing issues. The Harry S Truman Coordinating Council operates the Harry S Truman Community Development Corporation, a Community Housing Development Organization (CHDO). It was through this capacity that I and others who worked for the Harry S Truman Coordinating Council conducted most of our disaster recovery assistance for survivors from the tornado. It was in these meetings with

survivors that I begin to gain an understanding how residents were recovering from the disaster. I would take what I begin to learn in this capacity and apply it later on when I began to work on this research project.

In the spring and summer of 2015, I interviewed survivors with a more thorough series of questions than were used in the previous surveys. These questions centered around survivors' experience during and after the immediacy of the tornado. In addition to that, questions centered around the first few days after the tornado when people struggled to pull themselves out of the wreckage and rubble. Lastly the questions of these interviews probed people's long term recovery asking who help them, how long they were helped for, and the major effects the tornado has had on them, their family and/or household.³

The structure of interviews provides a larger scope of reference, manifesting a greater picture than a short survey. The surveys I conducted are very valuable in that they provided a better glimpse into people's lives. The interviews provided more of the background story to survivors' recovery efforts. Lastly there was a final question about asking survivors about the major effects that the tornado has caused their family or household in the long term. In asking these kinds of questions, I was trying to gain a better understanding of the long term effects of the tornado on individual residents and individual households. My story as a survivor only goes so far, because of this it is invaluable to gather more stories, data, and documentation concerning the tornado disaster and recovery.

Many people that I have had the opportunity to talk with have said something very similar in that that Sunday either started off strange or became rather peculiar

³ The interview questions are located in the Appendix 2.

nearer the time that the tornado struck. Information like this was beyond the focus of my survey, but it was my hope to glean more and more information from survivors through their interviews, concerning survival and recovery that went beyond the limited scope of my survey. For better or for worse, I tried. I was not as successful in interviewing people as I was in surveying. I was only able to interview five families or households.

Each interview is over an hour sometimes two or more hours. They largely contain anecdotal evidence but even in that there is much to learn from survivors rebuilding their lives. There are very clear indicators that corroborated the research that I gained from the surveys about recovery and the aid that was provided survivors.

Extended Interviews with representatives from agencies and organizations that worked in Joplin after the tornado:

I wanted to interview officials from the City of Joplin and many individuals who worked for the organizations and churches that aided survivors in the immediate response and in long term recovery. In the summer of 2015, I met with twenty-three different people representing seventeen different organizations that worked to aid the city and residents in Joplin after the disaster, unfortunately only a small minority of these interviews are included in this paper. In my body of research, I call these “professional interviews” in an attempt to separate these from the interviews with survivors. The questions are vastly different from survivor interviews, and these questions seek to understand which organizations helped survivors after the tornado and in what tangible ways. I asked professionals about their initial response to the tornado and their long term recovery efforts that they worked on. I asked them for self-evaluations of their

work and about their greatest achievements in post-tornado Joplin. Additionally, I asked them about other organizations that they worked alongside. Lastly I asked them about their thoughts on the opportunity to do it over again, responding to survivors and aiding residents of Joplin, what would they do differently now that they have been through the storm?

My personal experiences living in Joplin before and after the tornado:

One of the unique areas that contributed to the overall methodology and framework of this project is evidenced by my own personal experiences living in Joplin before and after the tornado as I discussed at length in the Introduction. I lost a portion of my personal property but I was fortunately out of the path of the tornado at the time that it passed through Joplin. In being a resident of Joplin for years before and after the tornado, I was privileged to watch Joplin grow and develop and continually reinvent itself in the years leading up to the tornado. This trend continued with greater intensity after the tornado disaster.

My professional experiences working in post-disaster Joplin and other disasters:

The other unique area that I can contribute to disaster research is working in a professional capacity after the tornado as recovery worker. This makes up the crux of my research--first hand interviews conducted with survivors in an official capacity formally in 2011 and 2012. I was able to leverage my time spent living in Joplin working for the local regional planning commission, the Harry S Truman Coordinating Council (HSTCC), first as an intern and later as a full-time employee into my research and into my conclusions on post-disaster recovery.

I was able to start working with the local regional planning commission within five days of the tornado event happening. I spent my earliest time there, over a month, meeting with survivors at the Multi-Agency Resource Center (MARC), “The MARC is a partnership coordinated under the unified command of the Missouri State Emergency Management Agency, the American Red Cross and the Salvation Army” (KMOX, 2011). My colleagues and I were trying to help survivors with long term housing solutions to get people back into rebuilt or new homes as quickly as possible. Additionally, for months after the tornado, I worked with a few other individuals from HSTCC inside the Long Term Recovery Committee (LTRC) that was set up by the local Jasper County Community Organizations Active in Disasters (COAD). The LTRC was a coalition of organizations that was tasked with providing for unmet needs that survivors had after the tornado. Working under an umbrella agreement with the Red Cross and other organizations that provided case-management of survivors, those of us working at HSTCC were able to meet with more survivors to help create opportunities for long term housing solutions, primarily from funding through state agencies.

The Harry S Truman Coordinating Council was able to secure funding from the Economic Development Administration, operating as an entity under the Federal Department of Commerce. This was a partnership with the City of Joplin in which the city hired a Disaster Recovery Planner and HSTCC additionally hired one. I was fortunate enough to work alongside our Disaster Recovery Planner(s) to help them create and implement plans for the growth and reconstruction of Joplin and the surrounding areas after the tornado.

This was my first experience working in a disaster recovery role, and at the time most of this project was written, the only one I had ever been in. I had really hoped that the city would personally reach out to every household checking on their well-being, their needs, and their concerns. I did not know how the 90-day moratorium was going to affect people's ability to rebuild. I realize, years after the event, that that is far-fetched and possibly an unobtainable goal in larger cities like Joplin.

Joplin is part of two different counties, it could be relatively difficult to check-on and follow up with every single survivor or household. What I learned is that the city relied upon other agencies and aid organizations to take care of most individual follow ups with survivors. FEMA attempts to reach out to every household that is affected by disaster, assessing their loss and their needs for response and recover. This has been getting better over the years as FEMA has transitioned into an on-field disaster survivor assistance program that goes out to sign people up for FEMA on the spot or handout FEMA contact information to every person they interact with in the disaster. The disaster survivor assistance program operates underneath the individual assistance program of FEMA, and now having worked alongside people who do this kind of work, I have seen them bear the burden of survivors and actively work to provide for their tangible needs as quickly as possible.

At the recovery phase, i.e. after the disaster response stage, other agencies and organizations generally respond to the unmet needs. In Joplin, this was carried out by the Long Term Recovery Committee (LTRC), the association of non-profit agencies stood up by the Jasper County Community Organizations Active in Disasters (COAD). The LTRC exists and operates as a clearinghouse for all agencies and organizations

active at a local level, “The Long Term Recovery Committee and the COAD work to leverage funds, donated goods, and member agency resources to assist individuals and families in their disaster recovery” (King, 2011). After the tornado struck, the Jasper County COAD stood up the LTRC from existing organizations and existing relationships to assist survivors with unmet needs and unforeseen needs that they would have in their own personal recoveries (King, 2011). The LTRC was willing to have an open door policy with local agencies, organizations, nonprofits, and churches, inviting anyone who wanted to help Joplin residents recover from the tornado. According to people involved with the COAD, before the tornado Joplin was a relatively divided city, or at least a city where there were some actual divisions in that not everyone knew each other (King, 2015). Most people kept to themselves and most organizations targeted and worked among their represented constituencies. After the tornado it seemed that everybody knew each other, the disaster brought many people working at local aid agencies together because everyone wanted to bring Joplin back. They did not want to let Joplin stay the way it was and not recover. This was their home as much as it was for any other person or survivor who lived in the city during 2011.

After a disaster every need cannot be met in the immediacy nor was every need known. A lot of times the biggest aid that survivors needed was money for rent or hotel and gas cards. Since oftentimes people's homes were destroyed or the rental units destroyed and they had nowhere to go, they were forced to live in hotels or in other rental units, at times far from their original homes. FEMA and other agencies' ability to provide survivors with the funds needed to live and possibly commute far distances from

where they were temporarily staying to where their former home was located was a big help to many survivors.

In my early work, I mixed the city's efforts and the CART's efforts as if they were one. I now recognize that they are connected but that they technically are separate entities operating autonomously. CART did solicit input from residents of Joplin and used that input to create plans. The Joplin CART, in creating their vision, identified multiple recovery sector goals that they were interested in promoting, uplifting, and rebuilding. These goals were economic development, infrastructure and environment, schools and community facilities, and lastly housing and neighborhoods. Each of these sectors had multiple goals that had community-driven input underneath them, and they included such things as "encourage sustainable and energy-efficient building techniques," "designate key commercial core doors to allow for consistent business development in areas," or "create a community mindset that values environmental sustainability through such efforts as recycling, reforestation, and water management" (Cage, 2011, CART). These goals were part of these plans that were eventually presented to the City of Joplin on November 7, 2011, as a vision for which people hope Joplin would come back as. In the two years that followed from public input meetings to formal working goals, the CART attempted to bring many of their ideas to the public and to the city for official adoption. Unfortunately, not all of the CART's plans came to fruition. In a "Report Card" presented to the City of Joplin and other stakeholders in January, 2013, the document visibly lists which projects had or had not been initiated, projects that were underway, and projects that were completed. One other critical aspect about the CART is their recommendation of Wallace Bajjali as the City's Master

Developer. This group was ultimately chosen over five other applicants for the position and in the years since the decision, the company abruptly left town and eventually defaulted on agreements with the city (Woodin, 2015, January 23; Woodin, 2015, January 26). As of this writing the City of Joplin and the company chosen as the Master Developer, Wallace Bajjali, are embroiled in a legal case (Woodin. 2016, August 23).

In my time living and working in Joplin to my time being an active researcher working on this project, I have seen and met with hundreds, if not thousands of survivors of the Joplin tornado. I myself am one, and my experiences in Joplin will continue to shape me and my career for the rest of my life. This section explains the development of my thoughts, work, and at points my struggles with living in a city struck by catastrophe: first as a survivor, then as a disaster worker, and finally as a disaster researcher.

Chapter IV -- Survey and Interview Results

Surveys:

Although no survey or interview is perfect or entirely complete in its scope and scale, there is always more to learn and more quantify or qualify. With this acknowledgement I created a table of the results that I gleaned from survivors concerning their recoveries⁴. In going over these results there are a few trends that can be extrapolated and expanded upon.

Trend 1	Applied for Aid	Yes
Trend 2	Other Aid Received	Varied w/ similar sources
Trend 3	Public Input Meetings	Overwhelming “no”
Trend 4	Voice to City	Very little

Figure 1: Table of Survey Trends. Source: Author

In the first trend I observed that 90% of the survivors I met with signed up for FEMA and the Red Cross. This is not indicative of whether they received aid from either source, but it does set a benchmark for people’s interaction with the primary aid sources that have been established here in the United States. From a FEMA perspective it is important to get as many survivors as possible signed up with the agency. This is not only just for the benefit of the survivor but also for the benefit of the city the state and the agency itself. With FEMA knowing the full picture of the impact and the effects of the disaster on victims and survivors, it allows FEMA to give the

⁴ This data table is located in the Appendix 3.

appropriate governmental aid to the city in the its efforts to build back. Additionally, these numbers allow FEMA to better create resources and tools in large-scale disaster situations. In some disasters FEMA has had issues with getting people to sign up. As mentioned elsewhere many survivors of the tornado felt that they were not in need after the tornado and felt that they did not deserve aid. The deadline for signing up for FEMA in Joplin after the tornado was extended a few times to encourage survivors to apply.

The second trend was an examination into other possible aid that was available to survivors. A large majority of the housing stock in Joplin that was destroyed consisted of rentals or rent-to-own, after the tornado there is only so many livable homes that could be provided to people. This is where agencies that are part of the Long-term Recovery Committee become so critical in helping meet unmet and unanticipated needs for people who in many cases have nothing and nowhere else to turn. Most people that were homeowners had insurance. Outside of FEMA and insurance, most survivors that I met with and surveyed were helped by primarily three different groups.

A large number of the survivors that I met with would list their family, friends, and neighbors as the primary aid group that helped them either get out of the wreckage or get back on their own feet. In one of my interviews the parent of victim immediately showed up after the tornado looking for his daughter and her family, driving across town through debris and wreckage. They helped them pack up what little they could salvage that night and then took them to stay with other family members. Another survivor family was visiting family when the tornado struck and when they returned home, found nothing left. They immediately returned to that family's house that they were visiting

and essentially moved in for a time as they worked to rebuild their lives. Lastly a survivor I met with was on the phone with her neighbor when the tornado struck, and after taking shelter in her home her neighbor came and pulled her out of the wreckage left by the tornado that used to be her house. Many survivors who did not own their homes received aid from local nonprofits and churches in the Joplin area.

The third trend is another critical piece that I learned during my research. In my sample size only three households or individuals surveyed went to the public input meetings that were held in the aftermath of the tornado. This means that 85% of survivors that I surveyed did not or were not able to visit the multiple meetings that were held across the city of Joplin.

In talking with survivors who did not attend the meetings, there were two very common reasons given for their inability to attend the meetings. The first is that most survivors were extremely busy rebuilding their lives to be bothered with meetings. Between debris removal such as picking up glass out of their yard, finding a new home, going through the bureaucracy of creating new identification documents such as licenses or marriage certificates, and working their job(s) survivors do not have much time to take care of anything that was not essential to survival. This is greatly disconcerting to myself as someone who works in the field of urban planning, a field which relies on public input to chart the course and future of cities and regions. How can we know the will of the people we are supposed to serve if we do not give them opportunity to speak or if they do not chose to participate when opportunity is given? What is most devastating, is that those most affected had in many cases the least input into the larger changes that were happening in their city? For most homeowners, they

had agency in how their own property was rebuilt or recreated, in most circumstances, but they were relatively voiceless in the rebuilding and recovery of the city of Joplin as a whole. This raises questions about the integrity of the Citizens Advisory Recovery Team and its document *Listening to Joplin*. Was this document just an effort to listen to push through ideas from the political elites to give the appearance of agency and equity given to all residents of Joplin concerning their future? We may never fully know the answer to this, but time will help to demonstrate how much control the power elites had in crafting the future of Joplin as development happens and the future unravels. As someone who helped work at these meetings, I felt that there was a disproportionate amount of people who came to these meetings who were not even victims of the tornado. Since they did not have to worry about disaster help, they were able to give more input, and they were less busy with “trying to survive.” This adds to the already disenfranchised mentality that survivors had from the tornado, in that they didn’t have the opportunity to voice concerns, but then that other residents had more opportunity to voice possibly opposing or contrary views than survivors could have had.

It’s important to realize though that this does not include the many renters who lived in Joplin who ultimately had little-to-no agency concerning their future as the mentality towards them is that, “they are just renters, we only care about homeowners.” This mentality is pervasive even in relief organizations. FEMA gives homeowners a much larger portion of “aid and assistance” to victims that were homeowners. Now understandably there is a reason for this as homeowners generally lose more from a value side, but ultimately everyone is starting at the same level of need when it comes to a disaster regardless of whether they owned their home, were a renter, or lived in a

trailer. Everyone needs access to the same basic needs after a disaster of the magnitude such as the Joplin tornado, which for this example will be based on short-term and long-term housing.

The fourth trend that I would like to address from my survey data is that most survivors felt that in addition to the lack of agency concerning change associated from public input meetings, most survivors felt that the city of Joplin cared little about their personal recovery; that they did not have their voices heard by the city. I asked survivors to “rate on a scale of 1 to 5 did you feel your voice and opinion mattered to the City’s recovery efforts?” Surprisingly most survivors felt that they had little-to-no voice in the concern of the city’s affairs and recovery efforts. Many survivors asked if they could give a rating of “0” instead of “1” to explain how little they felt that they matter. This is rather discouraging for post-disaster recovery, in that as a worker trying to help meet unmet needs, the people that I’m working with feel they have no voice. They feel that they have no agency in the recovery as a whole, and that the things that have happened in Joplin since the tornado, were for the benefit of very few as opposed to the benefit of many. When I averaged the numbers for respondents, the average was 1.25 on a scale of 1 to 5. This is a horrifyingly low number for a place that is trying to keep as many residents as possible from leaving or moving away from the city as they need everyone to rebound back from the tornado. Measures to address the lack of interaction or communication between the city officials and residents is a problem that may never have a perfect solution. Events such as the public input meetings mentioned earlier are but one possible venue in which to try and attempt to give opportunity for

people's voices to be heard, but as mentioned earlier, what if even those meetings are but tools that either are censored or inaccessible for all survivors and residents.

Interviews:

In the research that I conducted interviewing survivors and the aid agencies that help them, there are some observations that can be made. Throughout this paper gathered from the stories told by survivors about their own recoveries, people were mostly restored to a new normal by three different main forms of social capital, that I will further address in the General Discussion section of this paper:

1. Family, friends, and neighbors.
2. Slightly removed relationships such as social associations or clubs, local religious connections like churches, or work/employment relationships.
3. Local nonprofit groups and non-governmental organizations.

In going over results from survivors there is a trend that that runs through people's recoveries. In all the interviews I conducted every single household signed up to receive assistance from FEMA. That does not entitle them to assistance and so for many survivors, they had to come to the realization that not all the assistance they needed or wanted would come from the official sources such as the government. For many survivors this placed them into a rather difficult predicament since life needed to go on, but there was much work to be done rebuilding their lives just to get back to where they were before the tornado. I would liken FEMA to a band aid that is placed

over a deep wound. This wound needs stitches but right now all you have is band aids and so band aids will have to do the job for now. When survivors who were renters receive financial assistance, usually below \$5,000, how far is that to go in getting them back to even the mere modest level of their lives before the storm? For homeowners this is obviously different as they have possibly even more work to do to return to normalcy with overseeing the possible demolition of their home, debris removal, and then eventual reconstruction. Yet even they do not receive enough to start over. For them too FEMA is little more than a band aid.

What survivors need in this metaphor are stitches to the deep wounds that in many cases took everything they had away. FEMA will help them with two to three months of rent assistance or with purchasing some big ticket items they may have lost such as a personal computer, a car, a nice couch, or a TV. Yet those limited items and that rental assistance does not constitute a home for a family or household. They need more help and oftentimes they do not have the means to afford these needs and must rely on the kindness of others. In Joplin this was composed usually of family and churches picking up the ball and carrying it forward. They were the stitches that allowed families to be held in place and their lives to come back together.

One of the unique advantages that churches and other non-profits have is their lack of limitations on the amount and use of their funding. A church in ministering to its parish or community can give to any and all needs as it sees fit. So for a church this could be such a possibility as to 'deputize' its members and give them money to give away to anyone they might know that was a survivor, there were multiple churches in Joplin that approached their aid and assistance giving to survivors this way. A church has the

maximum amount of freedom in how aid is given away as long as there is aid and assistance to give away, which is another important feature of local churches. If a church sends out a request to their denomination, the denomination can put forward a request to send financial assistance and other forms of aid to this local church in Joplin, who then can give towards anyone in need. This is the power of social capital, as it is possible that churches may miss needs or only give to those that are in their parish, and that oversight is hard to control. In many cases this is why the Long-term Recovery Committee existed to take care of unmet needs that were being missed by others and other organizations.

It is not a perfect system and unfortunately some survivors may have expected to receive much more aid and assistance from the Federal Government through FEMA or the Small Business Administration (SBA), among many other federal agencies working after disasters. This pre-disaster expectation towards “where help comes from” that many US citizens are generally unfamiliar with is something that needs be improved nationwide, such knowledge unfortunately is only learned after experiencing or living through a large scale disaster. We need all citizens working to prepare for the worst, creating plans and routines for when disaster strikes. Having a disaster preparedness plan and putting away or storing the necessary resources to survive after a disaster can make a monstrous difference in your own recovery. Emergency management workers need to encourage their city, town, or county governments to encourage their residents to be proactive in being prepared for disaster. FEMA will probably always remain a band aid for survivors and their recovery, but survivors can definitely be in situations

where they will not need as many stitches. Aid agencies and local non-profit such as churches will help provide that binding that holds peoples' lives together.

In talking with survivors there are some realizations that they have after they had lost everything. There is a sense of “new importance” over their lives after this disaster. When people lose everything they oftentimes realize the most important things in their lives are each other. Whether they lose a home, a car, or a precious sentimental belonging, they have come to realize that those things for the most part can be replaced, but each person in their family or household cannot be. One survivor discussed the new found freedom they had with everything being gone, and another was happy that they had the opportunity to “start over” collecting things and building a new life. It is not an ideal reality, to go through a disaster, but it does create new sense of value. What is now most important is not my sentimental things, but the people around me; the value of life. Many people see their belongings as an end in themselves, since you have all this stuff and you have to have a place to store it, but you would never willingly get rid of all of it at once. When it is forced upon you and you have to start again, some survivors found that it can be relatively liberating. In the end they realize that it's the relationships they have that are the most important, and most survivors would do anything to keep their families or households together even when they have nothing.

This section is an explanation of the findings and trends of the surveys and interviews that I conducted while living in Joplin, particularly in the Summer of 2015. These are not exhaustive measures or observations of the entire tornado disaster as it

occurred and was lived through. Survivors picked themselves up and each other and continued to make the best of the situation they found themselves in, rebuilding their lives one step at a time; brick by brick, piece by piece.

Chapter V -- General Discussion

Recovery - Perception and Practice:

It is common for American disaster victims to anticipate a top-down recovery process, coming from the state (government) and its largest partners. In the aftermath of Hurricane Katrina, a survivor was quoted wondering: "'Where is my government? I'm so disappointed...I want somebody to know that I'm suffering,' Jackson says, her voice breaking, 'and I shouldn't have to suffer'" (Myers, 2005). The survivors of natural disasters have largely developed the mindset or the expectation that the best and only aid comes from large external providers and agencies, particularly ones led by the federal government through FEMA. There are two sides to this notion: One is what if the aid provided is not what is needed, useful, or enough? The other is that there is an awakening to the power, ability, and resiliency of neighbors, friends, family, and other victims/survivors in the same disaster, this bears out in my own research. In the ever-growing body of literature around disasters and victims/survivors—both sides of this idea bear out.

The focus of this section is on the story of survivors' recovery from the tornado in Joplin. In researching this process, I stumbled upon the reality that most people recover relatively independently from aid or interference from large external providers of aid and assistance. The reality of this disaster, in comparison to other disasters in the United States and elsewhere in such places with large outside agency assistance, is that Joplin residents relied upon social capital that was either pre-existing to the storm or formed relatively quickly in the process of responding to the disaster and the recovery process.

I will first break down the four major areas where aid came from and their local manifestations that survivors encountered using portions of interviews with survivors.

This paper has traced that after disasters local relationships, local associations, and local networks are what carried the day for survivors. Building off of her own life experience after the Loma Prieta Earthquake of 1989, writer Rebecca Solnit highlights our misconceptions concerning the aftermath of disasters:

Two things matter the most about these ephemeral [the period immediately following a disaster] moments. First, they demonstrate what is possible or, perhaps more accurately, latent: the resilience and generosity of those around us in their ability to improvise another kind of society. Second, they demonstrate how deeply most of us desire connection, participation, altruism, and purposefulness. Thus the startling joy in disasters. (Solnit, 2009, p. 305)

The federal government operating through FEMA works to provide its citizens with the ability and capacity to prepare protect against, respond to, recover from, and mitigate all hazards and disasters. How this applies to every disaster is relatively unique. In the Joplin area, even though federal aid added up to more than \$174 million in public assistance and \$20.2 million to individual assistance, not every survivor household received equal amounts of aid or money (FEMA, 2011, November 16). This is due to every survivor or survivor-household having unique needs in a unique circumstance after the tornado. FEMA and its partners want to bring survivors back to their pre-disaster state; that was recovery for FEMA. Yet for many survivors their pre-disaster state of living was one that was, not ideal. In Joplin, even though many survivors, and almost nearly all that I surveyed and interviewed did, applied for FEMA, their recoveries were less enabled by FEMA than by their local social capital.

Compared to the larger context of disaster recovery, but focusing on the recovery of victims of the 2004-Indian Ocean Tsunami, Perera argues the following:

What is overlooked by the NGOs, the state, the architects, and in the mainstream literature on disaster mitigation, response, and recovery is how the survivors perceive and carry out their own “recovery” processes. Hardly anyone asked the victims --in any substantive sense-- how they wished to respond to their [own] predicament. It was simply implied that the victims lost their houses and jobs, and so providing houses and jobs equals recovery. Sometimes the victims were consulted, but largely to find ways to accommodate and/or incorporate them into their providers’ processes. The gap between providers’ and recipients’ perceptions was hardly bridged (Perera, 2016, p. 129).

This observation is largely applicable to Joplin as well: The industries of humanitarianism, aid, and assistance have largely predetermined goals and thought out expectations and methods. Sometimes what survivors need was not recognized by aid agencies; oftentimes ignored. In this context, operationalizing social capital, survivors did not wait for the outside world to help begin their own recoveries, but truly looked to each other to “(re)begin their life journeys from where they found themselves after the [disaster]” (Perera, 2016, p. 129).

Interestingly enough, in some aspects, the survivors of the Joplin tornado were unlike the victims mentioned in Perera’s work: “Immediately after the tsunami, the victims were disoriented and became passive dependents” (Perera, 2016, p. 130). The victims of the tornado were also confused and disoriented by their “new” surroundings, but they immediately began to pull each other out of the wreckage and started working through their belongings to piece their lives back together again. What Perera (2016) calls transforming from victims to survivors began almost immediately.

Survivors, for the most part, relied not upon aid agencies and the government to get them back on their feet, but on each other (i.e., family, friends, and neighbors) and

on the social capital they had through the local community in groups such as churches, social clubs, and employment relations. In this section I will differentiate and discuss the three forms of social capital, giving examples as seen in Joplin. Lastly it should be noted that no survivor household was only helped by one form or manifestation of social capital, as victims transitioned into survivors they were helped by all or most forms of social capital.

Social Capital:

It is important that the definition of social capital include both the actual resources and the relationship(s) that allow for these resources to be used and utilized. Aldrich enlarges the understanding of social capital, “[the] network view of social capital and envision it as the resources through bonding, bridging, and linking social networks along with the norms and information transmitted through those connections” (Aldrich, 2012, p. 33). I would simplify this explanation by breaking it into two: one part of social capital is the actual resources available that are usually out of the reach of survivors alone or individually. The other part is the relationship or network that fulfills the required connection or credential of “someone in the know”—one’s connection to that resource.

Social Capital-Forms, Hierarchy, and Examples in Joplin

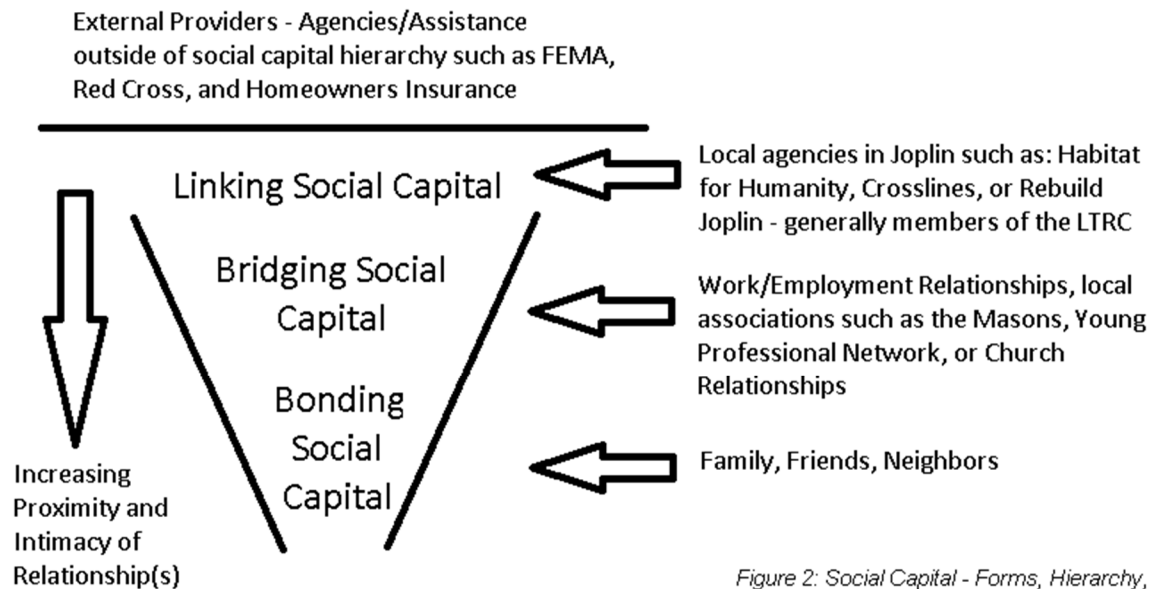


Figure 2: Social Capital - Forms, Hierarchy, and Examples in Joplin. Source: Author

Linking Social Capital:

Linking social capital, the highest level on the hierarchy displayed above in the diagram is the form of local social capital that is normally outside of a survivor's direct access but is known of and/or available with the right relationship or connection. In Joplin this was usually manifested in local organizations that were part of the LTRC (Long Term Recovery Committee). These organizations had resources but they may not have directly known every survivor or those survivors' needs. Additionally, linking social capital usually requires someone to grant you access or knowledge to know about the available resource or aid. Aldrich continues, "Some individuals have many email and Facebook contacts and broader social networks, while others are more isolated and independent" (Aldrich, 2012, p. 34). This could be easily manifested through a friend, a knowledgeable acquaintance, or a myriad of other venues of information dissemination. Most survivors may not know of available resources, but

they have relationships that do and in a situation of catastrophe these relationships work to provide the necessary connections to enable resources and those that hold them with the people, survivors, that need them.

In Joplin two very good examples of this form of linking social capital are the local organizations such as Joplin Area Habitat for Humanity and Rebuild Joplin. Both organizations worked to provide long-term housing solutions to survivors who were in predominant need of rebuilding, repair, or a new home. Qualifying for their assistance usually required a small amount of flexibility and willingness to go through some form of bureaucracy and red tape, “communicating ... up-to-date information—such as the best prices ... or ways to navigate complex bureaucracies—ties network or group members to each other as they come to recognized the value of these data” (Aldrich, 2012, p. 38). In many cases this need of information to be aware of assistance and the necessary “knife” to cut through red tape is a function of linking social capital.

In my interviews, these are examples of survivors who relied on locally known relationships, networks, and connections they had or knew of to connect them with larger resources and assistance. One was John and Mindy whom I met in their home that they had rebuilt after the tornado a little over three years after they had finished rebuilding their home. After the tornado, the house that John and Mindy lived was twisted on its foundation and everything inside were devastated. They had to remove everything down to the studs and rebuild all of the inside and the entire outside shell of the house. They were home when the tornado struck; the family (husband, wife, and three children) had crammed into a small closet. When they climbed out of the closet the roof was gone, all their windows were broken, even nails had come out of the walls.

They were unique among my interviewees in that they were actual homeowners. Even with owning their home and property it took them until just before Christmas, nearly eight months, to be able to move back into their house. First they were unable to begin work on their house until three or four weeks after the tornado. They had been told to leave everything but by the time they returned, everything was moldy and ruined.

They had great difficulty wrestling with their homeowner's insurance, they had to reach out to the corporate office to constantly ask for an adjuster to come by their home and examine the damage and give them an estimate of the damage costs and their value in what was salvageable and unsalvageable. Like most of the homeowners in the path of the tornado, they learned that they were underinsured. Moreover, their house had a depreciated value. In short, the house had over \$40,000 in damage, but they received only \$25,000 due to the depreciated value of the home.

This money was both to rebuild their home and to provide them with the means to replace what had been lost to the storm. Hence they had to fight for every penny they received. Mindy told me, "We did not have all the money we needed to replace the things we lost, so we had to juggle around money to buy things and buy stuff to repair our home."

Yet through some local relationships, that is forms of linking social capital, they were able to connect with the large national relief agency Samaritan's Purse. It provided manpower, tools and building materials, and knowledgeable building direction and assistance to John and Mindy in the reconstruction of their home. Still it took them nearly eight months to move back into their home. This was not the only area nor form

of social capital involved in their recovery but this serves as an example of linking social capital.

Another household that used linking social capital is that of Paul and Chani. This family was standing outside their apartment moments before the tornado. Paul told me that he could not see the tornado as it was wrapped in rain, but knew it was headed towards his apartment complex as the sky was darker directly to the west of them. Standing near his neighbors, who lived below them in the apartment complex, he told them that they should all go in the neighbor's bathroom.

Chani, who was pregnant with their second child, along with her brother and sister and first child huddled in that small bathroom next to this extended family from California that had never seen or encountered a tornado. Along with their neighbors' family, nearly ten people, they all huddled in the lower level bathroom were jammed in this small bathroom.

Paul told me that he, his brother-in-law, and another man held the door trying to keep it from breaking apart, "The door felt like it was shattering apart from the pressure as the tornado passed on top of us." Chani was in the bathtub with all the children huddled between her and the neighbor's grandma, trying to keep them safe. They told me that it was overwhelming and terrifying in this little space, everyone screaming as the tornado rushed over them.

All survived but, when they came out, they found the apartment complex devastated. It was a large apartment complex where several hundred people lived. It had been wiped out by the tornado. Paul asked Chani to stay near the apartment as he and his brother-in-law were going to take loops around the complex and try to help pull

people out of the rubble. Eventually, another brother-in-law of Paul's, who had come to help Paul and his family, found him and expressed to him that he needed to go back to his apartment and gather his family's things together.

Paul told me that he was at first confused, it was in that moment that he realized he was more than just someone responding to the storm. He and his family were actually themselves victims of the storm. They went back the next day and gathered up more of their salvageable belongings and then left. They would not return to this place of devastation for many months.

They signed up for FEMA and received a mere few thousand dollars in assistance as renters to replace household furniture, clothes, a computer, and help fix and replace their cars. They were fortunate in that after the storm they qualified for other assistance such as Supplemental Nutrition Assistance Program (SNAP) and a low-income subsidized apartment. These two were not programs that they had applied to in the past, but after the storm and going over their finances with aid agencies and their church they were encouraged to apply.

This exact opportunity in which they were helped along to push through the bureaucratic red tape of disaster assistance was helped along by linking capital from their church College Heights Christian Church and through people who were aware of their current situation. It turned out that after the tornado they were in such a financial place that they qualified for certain assistance they had not known of before the tornado. Even though they lost relatively everything that they had, Paul told me that with all of the assistance and gifts they had received they, as a family, were better off than they had ever been.

After disasters linking social capital can be a very powerful tool for survivors in that it can provide them with greater access and knowledge to outside forces and agencies from which they can receive aid. It takes relationships and at times extensive networks to connect people to outside resources and assistance.

Bridging Social Capital:

I place bridging social capital in the middle ground between people's close relationships among themselves that make up the site/s for social capital and the distanced relationships that connect them to greater access and resources. Aldrich states that bridging social capital, "connects members of the group or networks to extralocal networks, crossing ethnic, racial, and religious cleavages... Bridging activities and organizations bring together individuals from different locations, identities, and language groups" (Aldrich, 2012, p. 32). This binds people of similar socio-economic and cultural indicators as well as proximity due to everyday life. In this paper I classify bridging social capital as the relationships, networks, and connections of people that are part of someone's life but slightly removed. An example would be that of the boss who lends out his car to a survivor so they can drive around town to meet with various agencies after the storm, or the church that donates money, time, and volunteers to help someone rebuild their home.

Your coworkers may not be your friends but they are people you share a close relationship and proximity to. In certain contexts, they would be of great assistance, such as needing a ride to work since your car is in the repair shop. Additionally, I would place local associations that people belong to such as professional and/or development

groups such as Toastmasters or the Joplin Young Professionals Network, religious organizations such as churches, or social associations and affiliations such as the local Freemasons lodge, parent-teacher associations or the Fraternal Order of the Eagles as examples. After the tornado, it is my argument that bridging social capital, mostly manifested in local Joplin churches, carried the day for residents' survival and recovery. In my interviews ever single interviewee was assisted by bridging social capital.

Owen was actually at Walmart when the tornado struck. He had been riding in a tow truck there to have his daughter's car worked on as the sirens went off. He told me, he and the driver of the tow truck were the last two people led into Walmart before they locked the doors. He ran to layaway in the back of the store and the power went out as he was running there. Some ceiling tiles fell near him and he put them over his head as the roof gave way. He said, "The roof peeled off as if someone took a can opener to it."

After the event, he helped get some people out of the store, but the police were there immediately to prevent people from stealing guns and ammunition from the store and another nearby sporting-goods store called Academy. He walked up the street and someone drove by and offered to give him a ride up to Forest Park Baptist Church.

His wife, Beru, and their daughter were there in a tunnel underneath the church holding out as tornado passed. He and his family were unable to get home until the next day. An oak tree had landed on the house and across one of their cars and another car from somewhere else had landed in the driveway.

They had two weeks to clean up and figure out what they wanted to do with their things as they were renting a house and the landlord decided to have the house demolished. They were able to salvage about 25% of their possessions, throwing away

so much of what they could not save. He said, "Material things don't mean nothing; lives matter."

I asked them how did they get back up on their feet and they gave one simple answer, "church." Through their relationships at the church Forest Park Baptist Church, they were able to find a new rental property to live in. They received new furniture, a "new" used car, food, gas cards, and small amounts of money from Forest Park and other local churches. Owen told me that, "if it wasn't for our church, we wouldn't have made it." This sentiment was made to me over and over throughout my research and time spent in Joplin, Koenig (2006, p. ix) expresses this writing:

The faith community is often the first to respond to natural disasters and acts of terrorism. Even before Hurricane Katrina made landfall near New Orleans on August 29, 2005, churches were taking in evacuees, and within forty-eight hours after the hurricane hit, they were delivering emergency supplies to victims--well before Federal Emergency Management (FEMA) workers arrived on the scene.

Another survivor household that I interviewed, Luke and Mara were very lucky that they were not at their rental house when the tornado struck. They were three blocks away in a storm shelter at Luke's parents' home. Their first thought after seeing what was once their house was, "We have nothing." Their house was in the middle of the tornado path. "We were over at our in-laws. We were so fortunate in that we were not at our home, because our house was gone, a semi-truck went through the home. It was a total loss; our car was damaged but not destroyed." I asked them what they recall most after the tornado had passed over:

It was scary! Nothing was the same; it was so surreal. We went outside and looked around, and there are no movies that even match what we were walking through. Gas smells everywhere, smoke in the air. Everyone is walking, calling out to loved ones, people with cuts and scrapes. I'm only 3 blocks away from my house and I cannot find it!

Like most renters they did not have renter's insurance and relied initially on rental assistance from FEMA accompanied by a meager amount towards replacing a few big-ticket items. Through a unique opportunity, Luke, who works as an independent photographer and creative was loaned equipment from his competitors so that he could continue working in the immediacy after the storm. He lost all of his photography equipment, but was able to continue with his scheduled photo shoots and events due to the generosity of his competitors who all knew him and competed in the same small market of Joplin.

Additionally, Luke and Mara were recipients of gifts from the book club they were part of and members of this book club also raised funds from a separate collective, a writers' club that had members all over the country. They gave Luke financial assistance, raised online, to help him eventually go out and purchase a new camera and photography equipment. These two unique connections helped him keep his business open and operating continuously with no setbacks from the tornado. These are two examples of bridging social capital, in that these connections were connections of friends that wanted and were able to help provide for Luke and Mara.

Bringing back John and Mindy's story, I wanted to mention that even though they were recipients of linking capital, that which is entirely outside their network and connections, they also were recipients of bridging capital from local churches. The work in comparison to the initial funding that they received was overwhelming, in addition to the funding and construction assistance from Samaritan's Purse, they were beneficiaries of multiple churches' assistance. John, as a member of the Missouri National Guard, was called up to active duty following the tornado. He along with other

members of the Missouri National Guard worked to find survivors through active search and rescue operations as well as patrol the debris and rubble. This way, local people and resources were largely involved in search and rescue too, before and along with external help.

When this deployment was over after five months John went back to his job as a draftsman. However, he was laid off within two months, right before Christmas. This was around the same time as they were able to move back into their rebuilt house, after eight months of construction and rebuilding. Seeing an opportunity to provide for a survivor family that was going to be in a relatively desperate situation, College Heights Christian Church put the family on their "adopt-a-family" list; they received \$5,000 to use as they saw fit (Lieb, 2015). They told me, "We kept taking hits, but every time something would happen, the church was there to help us."

They still are wrestling with the side effects and the trauma of the storm. Years later, after having spent so much time, just trying to survive and eke out an existence after the tornado. They still have some of their belongings packed up in boxes in storage in their shed since the cleanup from the tornado. They told me about how their children exhibited post-traumatic stress disorder (PTSD) symptoms for a long while after the storm. The eight months they spent living without a home they could call their own, a lack of structure and permanence, which they claim contributed to the PTSD. Their children still have a fear of storms and now the family takes sirens much more seriously.

Bridging social capital is an effective resource that can assist survivors of natural disasters in their recovery. Generally, people are cognizant of these connections as they are usually members of them in some capacity. Yet oftentimes they may not be

aware of all that these networks, memberships, and associations can provide them. Creating opportunities for survivors to be aware of all that can be offered and given to them from bridging social capital resources would go very far to aid and assist survivors in future disasters.

Yet many associations and groups do not even fully know their own ability or agency in post-disaster situations. Talking with multiple church leaders about their churches work to help survivors, most of them were overwhelmed by the support and funding they received to give out to survivors. Multiple church leaders told me about the millions of dollars that they were given to directly give to survivors, most of the time with no strings attached. The relationships and ability of local churches to give out assistance to anyone, bridging social capital, has some very unique advantages in that oftentimes they are not prohibited in how and who they provide assistance to, they have little regulatory oversight in assistance to beneficiaries in need. I met with a church that gave the ability of every member of the church to request \$500 to give to any victim that they knew: friend, neighbor, anyone affected by the storm.

Bonding Social Capital:

The last manifestation of social capital operates between people of the same spatial and/or familial connections; this is called “bonding social capital.” Aldrich defines about bonding social capital as the “sorts of bonds within and between community members—where they can bypass social niceties and operate as if they were members of the same family” (Aldrich, 2012, p. 31). He goes on to state that, “This form of network centers on horizontal ties between individuals who are quite similar to each

other and may live within walking distance” (Aldrich, 2012, p. 31). In Joplin this corresponds to my main observations concerning survivors and their recoveries, that these are primarily based through their relationships with family, friends, and neighbors.

Leia felt that the Sunday the tornado struck was going to be a relaxing, do nothing kind of a day. In the afternoon as the weather started changing turning she decided she should go to the gym to work out. She got home a little bit before the tornado, and she called her neighbor. They usually talked on the phone during bad weather just to encourage one another, making sure that each other is safe. Her neighbor was not there at the time but her granddaughter was. They spoke on the phone for a while. As they were talking, the sky went black. Leia said to her neighbor’s granddaughter, “We need to go get safe.” To do so Leia ran into the bathroom and hid there. She recalled feeling the suction pulling her up, yet fortunately for her a piece of drywall fell in such a way to bury her and keep her from getting sucked out as the tornado passed overhead.

Her neighbor’s granddaughter found her and helped dig her out of her house once the tornado went past. She says,

I remember I had to crawl out through the opening in the ground. It seems like almost immediately that two guys were walking the streets trying to find people. Heads were just popping out of their craft houses. Seeing the mess was overwhelming. I didn’t even hear the sirens.

After staying with her neighbor’s family for the evening, Leia went back to her home to try to find what she could in the debris and to start the process of putting her life back together. It was not until the next day that she realized how large the tornado was and how many people were affected. She called one of her close friends who had an extra room and asked if she could stay for a few days. Those few days turned into a

few weeks and then into a few months. In her words, "I arrived somehow; I never left." She started receiving cards, gifts, and checks from friends and family who wanted to help her rebuild her life after the storm took everything away.

In talking with Leia, I asked her about the major effects of the tornado on her life. She said that, "it's become a marker for life decisions." She told me one day she went driving one afternoon and after an hour or so, ended up in front of where her old house had formerly been. It was gone; her landlord had owned 37 properties and every single one of them was destroyed in the tornado. She said standing in front of where her old house used to be, she had a moment where she realized, "I did not survive this to have anything less than a really good life." She said it was no different than having a wakeup call from a stroke or heart attack, but with the advantage of not having any attachment to old things as they had all been taken away.

She decided to start over, start multiple new businesses, and buy a home. She was able to do this, in that after the tornado she purchased a large home and opened a bed and breakfast, using money she received from bonding social capital, that is family and friends, to go out and start over with new-to-her belongings and things. Admitting to me during our interview, that she had very little left of her old life from before the tornado, she made a very quirky comment right at the end of our interview, "When your own history blows away, you buy someone else's."

Luke and Mara discussed with me at length some of the blessings and dissatisfactions of bonding social capital. They were overwhelmed and actually frustrated by the amount of aid that they received from their extended family from around the country. A distant relative took it upon themselves to contact everyone in

Luke's extended family, and trailers were driven down and boxes sent of things "family members thought we needed." Mara told me about all the "gifts" they received, most of it bad and useless, "Clothing, there was so much clothing. And we didn't need to wear 3XL shirts. There were so many clothes." She stated to me:

We were in a different house with new clothes, new things and family members would tell us, "we are bringing you lots of stuff." So many things we got that we did not need. Everyone was saving their clothes; stuff you couldn't sell away at a garage sale. Seven-year-old juice we got, people were like "they are really desperate, this will be a blessing, so we will empty out of cabinets and cupboards."

Mara expressed to me that there were times of desperation and frustration in having to go through clothes, food, just to find what could be salvaged in the donations. So much of their donations, and other survivors' donations, were unnecessary and unneeded. Most was thrown away along with the debris from the tornado. This is insult to injury, survivors had to deal with donors' expectations of what survivors need versus what differing understandings of what was good or needed. Mara said that what she really needed would be a Target gift card to go purchase things like diapers for their children, not mountains of ill fitted clothing and expired food.

They lived with Mara's parents for the first ten days after the storm, spending most of that time going through the rubble that was their former home. They were able to move into another property that was owned by Luke's grandfather, after essentially abandoning what was left of their old home. This new property needed work and Luke and Mara's separate families helped to bring the house up to decent living standards. Lastly Luke's great-aunt would collect checks from other family members and send them to Luke and Mara from time to time after the storm.

Luke told me about how he was going through the debris that was their home afterwards and he found one of his favorite vinyl records, it was his father's, The Beatles album *1967-1970* also known as "The Blue Album." He said, "It was a liberating in that moment [finding the album], knowing that everything was gone." Luke was heartbroken finding it shattered to pieces among the wreckage but he knew that it honestly did not matter in the grand scheme of life. He had his wife and their two children. They all made it out of the storm alive and to him that was all that mattered.

When disasters strike survivors need to begin rebuilding their lives immediately. Their relationships and networks, forms of social capital can have a make or break impact on their lives, and ultimately on the future outcome of the greater city or area after a disaster. If Joplin did not have such strong social capital, mostly pre-existing to the tornado, it would not have rebuilt so fast or recovered as quickly as it did. This does not imply that even at the time of writing this paper that Joplin is completely recovered. The existing social capital in Joplin helped keep people in and around the city, helping to promote and sustain the local population. Without it, it can be argued that there would have been an emptying of the city, as 1/3 of the housing stock was destroyed or damaged.

Aldrich writes concerning the lack of social capital in New Orleans after Hurricane Katrina, "Survivors of the 2005 post-Katrina flooding in New Orleans, for example did not want to return to be the only household on the block" (Aldrich, 2012, p. 47). Further on he states, that:

While New Orleans city officials could regularly update the status of electrical and gas utilities, schools, and other facilities after the storm,

such top-down memos and press release about broader “Building Back Plans” held little useful information for homeowners, who were more interested in hearing whether their neighbors also planned on returning...survivors wanted to hear from neighbors, store owners, and friends about their plans—this information was critical to their own decision making.

Joplin was fortunate in this as even four years after the tornado, the city leaders, per my discussion with them, discussed how Joplin had not lost population but had grown after the tornado. As I demonstrated above, much of that overall sustaining of population is due the availability and use of local social capital.

These relationships and connections were the crutch that supported people through the ordeal of disaster, response, and recovery. The value of interpersonal relationships became invaluable as survivors leaned on one another, and their relationships that were unaffected physically or materially by the storm. These relationships, friendships, and social capital are the key resource to resiliency before and after disasters.

Aid agencies and the government will eventually leave, but the local social capital displayed through close relationships and the Joplin local churches was what stayed--the relationships people had and created in spite of and in response to the storm gave survivors the perseverance to continue their struggle to stay stable and work to return to a new normal. These relationships are what rebuilt the city of Joplin. In talking with a local member of Jasper County Community Organizations Active in Disasters a few years after the storm, he said the community as a whole was more tight knit and more connected to each other: “We knew of each other, but now we know each other.”

After the Joplin tornado, victims who had in many cases lost everything banded together through their various connections, networks, and associations to rebuild their

lives. Working with assistance from greater external providers, survivors created a new normal from the ruins of their old lives, old homes, old belongings. Joplin is a different city after the tornado, its residents are different people, changed by the devastation witnessed and experienced. Yet they are stronger now than ever as the relationships created, formed, and strengthened gave them the necessary support and assistance they needed in such a time of travesty. These relationships, associations, and connections allowed residents to bond with each other in this time of need. These connections and associations enable survivors bridge the gaps between relationships, thereby providing them with aid beyond themselves that they may never have known of. The relationships they had gave survivors the linking connections to networks and assistance far outside of Joplin, helping them access and cut through red-tape to get to the aid and help that so many desperately needed. The residents of Joplin made Joplin a better city even in the face of such destruction.

Chapter VI -- Conclusion

This project adds to an ever growing body of research and literature that tells the fuller story of post-disaster recovery. This paper is a study into the lives of survivors of the Joplin Tornado of May 22, 2011. I've tried to elucidate and explore individual survivors and survivor households as they wrestled through the post disaster recovery process. Overall people recover receiving help from many sources. In Joplin the most important of those sources is through personal relationships categorized in this work as social capital. In Joplin we can state how close survivors rebuilt after their lives had been tossed about by the tornado. This is through relationships with family, friends, and neighbors or through relationships with people at their work or relationships with people through local associations, like nonprofits especially churches.

Throughout the Introduction and the Overview of Related Literature in chapter 2, I worked to place the Joplin tornado the larger context related to disasters overall. To do so, definitions, official documents, and other writers' works on disasters were critical to creating a framework for this paper. Along with that these two sections helped to give an overview of Joplin and place it in the greater context of disaster and post-disaster studies and research. Chapter 3 served as an entry into the tools that I used in creating this body of research and this paper. Most of the paper was built on the surveys and interviews with survivors four years after the tornado. These results were compiled and aggregated into some observable trends that I discussed at length in Chapter 4. It is important to note the small size of my sample in gathering these survey results, though it only contained twenty surveys and five extended interviews with survivor households,

the information and experiences of these survivors is powerful, nonetheless. In Chapter 5, I discussed through the main body of my work, that being interviews with survivors, exploring the day of the tornado and their immediate response. Additionally, I discuss with survivors their long-term recovery, discovering who were the people and agencies that provided them primary aid in recreating their lives and beginning anew. Throughout Chapter 5, I place the various assistance and aid given to survivors into a hierarchy of social capital, showing the connections between survivors, their networks and relationships, and the aid and assistance they passed from relationships and connections to survivors.

I believe that it is ever so important to place my work in the field in which I have studied at Ball State University: Urban Planning. Disasters happen, in urban planning this is an inevitable reality that the planning field must continually wrestle with as disasters will continue to occur, oftentimes with every increasing severity or frequency. This paper classified observable social networks and relationships inside the larger field of social capital all of which cannot be seen from outside.

The planning field as a whole has much to learn and much to contribute to social capital. The planners must create tools that can help manage, promote, encourage, and grow social capital in our cities, towns, and regions so that when disasters do strike, survivors can lean upon those nearest them to help them overcome the tragedy, loss, and devastation of disasters. One such tool that is growing in use and understanding is mapping a Social Vulnerability Index (SoVI Map). This tool can demonstrate to community leaders and local movers and shakers where there are greater areas of risk in communities that could use further assistance in times of trouble and uncertainty

presented by disasters. With the proper amount of encouragement, organizations, relationships, associations, and networks that exist and operate in areas of linking, bridging, or bonding social capital can look to bolster, support, and help grow their local communities.

Five and a half years after the tornado, Joplin is still recovering. It will continue to recovery for the long foreseeable future, as survivors are still wrestling with the effects of the tornado. Yet the city and its residents have come so incredibly far in rebuilding their lives and creating a new normal. The evidence of the tornado is mostly gone, but its scars will continue to live in hearts and minds of survivors for the rest of their lives. Yet with these scars came tremendous joy and comradery as survivors, their relationships and networks, friends, family, and neighbors banded together to build Joplin, and their lives back into something better than anything it was before.

Appendix 1: Survivor Survey Questionnaires

(This was the initial survey that was recreated after failing to adequately survey survivors)

Study Title: A People's Recovery: The Joplin Tornado of May 22, 2011

Interview questions for survivors of the Joplin Tornado of May 22, 2011

1. How were you affected by the Tornado of May 22, 2011?
2. Was your property affected?
3. Did you receive aid from any person(s) or organizations?
4. If so? Who and what organizations provided you aid?
5. Were any of your plans for rebuilding/recovery affected by the City of Joplin's recovery plans or its partners? (Wallace-Bajjali, Chamber of Commerce, City Planning Office, Economic Development Administration (EDA), etc...)
6. If so? How?
7. On a scale of 1 to 10 did you feel that you were given proper ability to voice concern over specific plans that would have an effect on your life or property?
8. Did you participate in any of the public input/interest meetings conducted after the storm?
9. If so? How did you participate?

(This is the final survey questionnaire that was used in this project)

Study Title: A People's Recovery: The Joplin Tornado of May 22, 2011

Study Purpose and Rationale

The purpose of this Creative Project is to provide a glimpse into the post-disaster recovery process from the perspectives of survivors. Often after a disaster the only story that is told is the official recovery story generally told by city officials and other leaders in the community. This project seeks to delve deeply into the stories of survivors as they rebuild their homes and their lives after the Joplin Tornado of May 22, 2011.

Inclusion/Exclusion Criteria

To be eligible to participate in this study, you must be between the ages of 18 and 100, and have been a resident of the City of Joplin on May 22, 2011.

Participation Procedures and Duration

For this project, you will be asked a series of questions about your experience(s) regarding your personal recovery from the tornado, in a short survey. What actions did you or your family take? Did you receive aid? If so from who? This survey should only take five minutes or so.

Data Confidentiality

All data will be maintained confidentially and no identifying information such as names will appear in any publication or presentation of the data.

Storage of Data

Any paper data will be stored in a locked safe in the researcher's office for a maximum of one year and will then be destroyed. The data will also be entered into computer software and stored on the researcher's password-protected computer for a maximum of one year and then deleted. Only members of the research team will have access to the data.

Risks or Discomforts

The only anticipated risk you may experience from participating in this study is that you may not feel comfortable answering some of the questions, as they may bring back unpleasant memories or unresolved feelings. You may choose not to answer any question that makes you uncomfortable and you may quit the study at any time.

Who to Contact Should You Experience Any Negative Effects from Participating in this Study

Should you experience any feelings of anxiety, there are counseling services available to you through Haven Counseling Center in Oronogo, MO with Eric Pagan, 417-673-0090. This service will be free-of-charge for participants.

Benefits

No perceived benefits for the participant.

Voluntary Participation

Your participation in this study is completely voluntary and you are free to withdraw your permission at any time for any reason without penalty or prejudice from the researcher. Please feel free to ask any questions of the researcher before signing this form or giving verbal consent and at any time during the study.

IRB Contact Information

For one's rights as a research subject, you may contact the following: For questions about your rights as a research subject, please contact the Director, Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070 or at irb@bsu.edu.

Study Title: The Joplin Tornado: A Peoples' Recovery

Verbal Consent for Telephone Interviews

Do you, _____, agree to participate in this research project entitled, A People's Recovery: The Joplin Tornado of May 22, 2011? Have you had the study explained to you and have your questions been answered to your satisfaction? Have you had the description read to you and do you give your consent to participate? Do you understand that you may receive a copy of this verbal consent form to keep for future reference, if you so choose?

To the best of your knowledge, you meet the inclusion/exclusion criteria for participation (described on the previous page) in this study.

(Verbal Consent may be given)

Date

Researcher Contact Information

Principal Investigator:

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Study Title: A People's Recovery: The Joplin Tornado of May 22, 2011

Hello my name is Tim Little and I am a graduate student from Ball State University in Muncie, Indiana. I am researching disaster recovery after the May 22, 2011 Tornado in Joplin. I have received your name from [organization/non-profit/person] as a qualified representation of survivor recovery. I was wondering if I could ask you a few questions concerning your recovery after the tornado. It should take five minutes or less to answer this survey.

[Read Survivor Survey Consent Form to Individual.]

Survey questions for survivors of the Joplin Tornado of May 22, 2011

1. How were you affected by the Tornado of May 22, 2011?
2. Did you “signup” for/with FEMA or the Red Cross? If not why?
3. Were you contacted by any city officials or representatives?
4. Did you receive aid from any person(s) or organizations? (From who?)
5. Were any of your rebuilding or recovery plans, positively or negatively, affected by the City of Joplin’s recovery plans? If so, how?
6. Did you participate in any of the public input and interest meetings conducted after the storm? If so, how?
7. On a scale of 1 to 5 did you feel your voice and opinion mattered to the City’s recovery efforts? (1 being very low, 5 being very high)
8. On a scale of 1 to 5 did you feel that you were in control of your own recovery efforts? (1 being very low, 5 being very high)
9. Were any of your building or recovery plans, positively or negatively, affected by any other organization besides the City? If so, how?
10. Is there anything about the City’s recovery from the tornado that stands out to you?
11. Is there anything else about your recovery from the tornado that stands out to you?

Appendix 2: Survivor Interview Questionnaire

Study Title: A People's Recovery: The Joplin Tornado of May 22, 2011

Study Purpose and Rationale

The purpose of this Creative Project is to provide a glimpse into the post-disaster recovery process from the perspectives of survivors. Often after a disaster the only story that is told is the official recovery story generally told by city officials and other leaders in the community. This project seeks to delve deeply into the stories of survivors as they rebuild their homes and their lives after the Joplin Tornado of May 22, 2011.

Inclusion/Exclusion Criteria

To be eligible to participate in this study, you must be between the ages of 18 and 100, and have been a resident of the City of Joplin on May 22, 2011.

Participation Procedures and Duration

For this project, you will be interviewed. You will be asked a series of questions about your experience(s) regarding your personal recovery from the tornado. What actions did you or your family take? Did you receive aid? If so from who? It will take approximately 30 minutes to complete this interview.

Audio Recording

For purposes of accuracy and transcription, with your permission, the interviews will be audio recorded. Any names used on the audiotape will be changed to pseudonyms when the tapes are transcribed. The tapes will be stored in a locked safe in the researcher's office for a maximum of one year and will then be erased. No recording will happen if the interview is conducted via telephone or if the interviewee does not want to be recorded.

Data Confidentiality

All data will be maintained confidentially and no identifying information such as names will appear in any publication or presentation of the data.

Storage of Data

Any paper data will be stored in a locked safe in the researcher's office for a maximum of one year and will then be destroyed. The data will also be entered into computer software and stored on the researcher's password-protected computer for a maximum of one year and then deleted. Only members of the research team will have access to the data.

Risks or Discomforts

The only anticipated risk from participating in this study is that you may not feel comfortable answering some of the questions, as they may bring back unpleasant memories or unresolved feelings. You may choose not to answer any question that makes you uncomfortable and you may quit the study at any time.

Who to Contact Should You Experience Any Negative Effects from Participating in this Study

Should you experience any feelings of anxiety, there are counseling services available to you through Haven Counseling Center in Oronogo, MO with Eric Pagan, 417-673-0090. This service will be free-of-charge for participants.

Benefits

No perceived benefits for the participant.

Voluntary Participation

Your participation in this study is completely voluntary and you are free to withdraw your permission at any time for any reason without penalty or prejudice from the researcher. Please feel free to ask any questions of the researcher before signing this form and at any time during the study.

IRB Contact Information

For one's rights as a research subject, you may contact the following: For questions about your rights as a research subject, please contact the Director, Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070 or at irb@bsu.edu.

Study Title: The Joplin Tornado: A Peoples' Recovery

Consent (for Audio Recording of Interview)

I, _____, agree to participate in this research project entitled, A People's Recovery: The Joplin Tornado of May 22, 2011. I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my consent to participate. I understand that I may receive a copy of this informed consent form to keep for future reference, if I so choose.

To the best of my knowledge, I meet the inclusion/exclusion criteria for participation (described on the previous page) in this study.

Participant's Signature

Date

Researcher Contact Information

Principal Investigator:

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Study Title: A People's Recovery: The Joplin Tornado of May 22, 2011

Interview questions for survivors of the Joplin Tornado of May 22, 2011

[Consent form must be signed]

1. Tell me about the day of the Tornado?
2. What do you recall most about the Tornado?
3. What did you experience after the Tornado passed?
4. Tell me about your first few days after the Tornado.
5. Who helped you begin your recovery?
6. Who has helped with your long-term recovery since the Tornado?
7. What have been the major effects of the Tornado on you and your family?

Appendix 3: Professional Interview Questionnaire

Study Title: A People's Recovery: The Joplin Tornado of May 22, 2011

Study Purpose and Rationale

The purpose of this Creative Project is to provide a glimpse into the post-disaster recovery process from the perspectives of survivors. Often after a disaster the only story that is told is the official recovery story generally told by city officials and other leaders in the community. This project seeks to delve deeply into the stories of survivors as they rebuild their homes and their lives after the Joplin Tornado of May 22, 2011.

Inclusion/Exclusion Criteria

To be eligible to participate in this study, you must be between the ages of 18 and 100, and have worked in or for the City of Joplin after the tornado of May 22, 2011.

Participation Procedures and Duration

For this project, you will be interviewed. You will be asked a series of questions about your experience(s) regarding you, your organization, or the City of Joplin's recovery from the tornado. What actions did you or your organization take? Did you give aid? If so to who? What did the City of Joplin do? What should have been done? Were there issues in the recovery? Were things done poorly? It will take approximately 30 minutes to complete this interview.

Audio Recording

For purposes of accuracy and transcription, with your permission, the interviews will be audio recorded. Any names used on the audiotape will be changed to pseudonyms when the tapes are transcribed. The tapes will be stored in a locked safe in the researcher's office for a maximum of one year and will then be erased. No recording will happen if the interview is conducted via telephone or if the interviewee does not want to be recorded.

Data Confidentiality

All data will be maintained confidentially and no identifying information such as names will appear in any publication or presentation of the data.

Storage of Data

Any paper data will be stored in a locked safe in the researcher's office for a maximum of one year and will then be destroyed. The data will also be entered into computer software and stored on the researcher's password-protected computer for a maximum of one year and then deleted. Only members of the research team will have access to the data.

Risks or Discomforts

The only anticipated risk from participating in this study is that you may not feel comfortable answering some of the questions, as they may bring back unpleasant memories or unresolved feelings. You may choose not to answer any question that makes you uncomfortable and you may quit the study at any time.

Who to Contact Should You Experience Any Negative Effects from Participating in this Study

Should you experience any feelings of anxiety, there are counseling services available to you through Haven Counseling Center in Oronogo, MO with Eric Pagan, 417-673-0090. This service will be free-of-charge for participants.

Benefits

No perceived benefits for the participant.

Voluntary Participation

Your participation in this study is completely voluntary and you are free to withdraw your permission at any time for any reason without penalty or prejudice from the researcher. Please feel free to ask any questions of the researcher before signing this form and at any time during the study.

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For one's rights as a research subject, you may contact the following: For questions about your rights as a research subject, please contact the Director, Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070 or at irb@bsu.edu.

Study Title: The Joplin Tornado: A Peoples' Recovery

Consent (for Audio Recording of Interview)

I, _____, agree to participate in this research project entitled, A People's Recovery: The Joplin Tornado of May 22, 2011. I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my consent to participate. I understand that I may receive a copy of this informed consent form to keep for future reference, if I so choose.

To the best of my knowledge, I meet the inclusion/exclusion criteria for participation (described on the previous page) in this study.

Participant's Signature

Date

Researcher Contact Information

Principal Investigator:

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Telephone: (765) 285-8606
Email: nperera@bsu.edu

Study Title: A People's Recovery: The Joplin Tornado of May 22, 2011

Hello my name is Tim Little and I am a graduate student from Ball State University in Muncie, Indiana. I am researching disaster recovery after the May 22, 2011 Tornado in Joplin. I have received your name as a qualified representation of recovery from the professional perspective. I was wondering if I could ask you a few questions concerning your recovery after the tornado. It should take 30 minutes or so.

[Give Professional Interview Consent Form to Individual.]

1. What is your profession and who did you work for during the recovery after the tornado?
2. How did your organization contribute to the recovery efforts after the tornado?
3. Did your organization provide aid to survivors? If so, in what ways?
4. Did your organization provide support to the City? If so, in what ways?
5. How did your profession, or work duties, change during the recovery period after the disaster?
6. How did your organization initially respond to the tornado?
7. How would you evaluate your organization's initial response?
8. How did your organization help in the long-term recovery of survivors?
9. How would you evaluate your organization's long-term support for survivors?
10. How did your organization help in the long-term recovery of the City?
11. How would you evaluate your organization's support for the City's long-term recovery effort?
12. What were your organization's greatest achievements?
13. Were there things that you wish would have been implemented differently?
14. What organizations did you work alongside?
15. What organizations were you impressed with during the recovery efforts?
16. What organizations, in your opinion, were not helpful to the Joplin recovery efforts?
17. What is the number one lesson you would teach to similar organizations for future disaster recovery efforts?
18. FEMA considered the Joplin disaster recovery efforts a success, would you agree? Why or why not?
19. Were there any unique advantages in Joplin that prepared it for the Tornado?
20. Were there any unique disadvantages in Joplin that inhibited effective responses to the disaster?
21. How can city governments better prepare for similar natural disasters?
22. What advice do you have for future planners that may encounter disasters? [ONLY PLANNERS]

Appendix 4: Survey Results Table

Qualifier/Name	1. How were you affected	2. Did you signup?	2A. Aid from FEMA	2B. Aid from Red Cross
A1	Total Loss (House destroyed)	Yes	No?	Yes
A10	Partial Loss (House damaged, 2 cars destroyed)	Yes	Yes	
A2	Total Loss	Yes	No	
A3	Total Loss (House destroyed, car)			
A4	Total Loss (House destroyed)	Yes	No	No
A5	Partial Loss (House was damaged)	No	No	No
A6	Total Loss (House destroyed)	No	No	No
A7	Total Loss (House destroyed)	Yes	Yes	
A8	Partial Loss (House damaged, car destroyed)	Yes	For Car	
A9	Total Loss (House destroyed)	Yes	Yes	No
B1	Partial Loss (Belongings, Houses was damaged)	Yes		Yes
B2	Total Loss (Rental House destroyed)			
B3	Total Loss (Belongings, Rental)	Yes	THU	
Gi1	Total Loss (Belongings, Cars, Rented Apartment)	Yes	Yes	
Hi1	Total Loss (Rental house, 2 Cars)	Yes	Yes (\$1500)	Yes
Li1	Total Loss (Rental house)	Yes		
Ni1	Total Loss (Rental house)	Yes	Yes, Rental Assistance and Item replacement	
Ri1	Total Loss (2 cars, owned House)	Yes	Nothing	Nothing
T1	Total Loss (car, apt)	Yes	Yes (few hundred)	No
T1	Total Loss (car, apt)	Yes	No, had renter's insurance	

Qualifier/Name	3. Contacted by city?	4. Aid? From?	5. Recovery Plans?	6. Public Interest Meetings	7.Voice to City
A1		Friends,	To busy to survive	No	1.5
A10		Habitat, Neighbors	N/A	Yes	5
A2		Insurance, Work, Churches		No	1
A3		Insurance, Churches, Work		No	0
A4		Insurance, Friends	Yes, couldn't build certain ways	No	0
A5		Insurance		No	0.5
A6		Insurance	Yes	No	2.5
A7		Habitat	No	No	3.5
A8		Insurance, FEMA		No	2.5
A9		Insurance	No help, no harm.	No	3.5
B1		Churches		Yes	0.5
B2		Renters Insurance, Churches, Local NGO		No	
B3		Churches, FEMA,	THU	No	0.5
Gi1		Family, Churches, Work, FEMA		No	0
Hi1	No	Churches/Family	No	No	1
Li1	No	Friends/Family, Business relations	house in different part of the city	Yes	1
Ni1	No	Family, Church, Business connections/competition	Didn't Rebuild	No	1
Ri1	No	Churches/Family	Yes	No	1
T1	No	Church	Moved Away	No	1
T1	No	Business, Churches, Friends	No	No	1

Qualifier/Name	8. Control of your recovery	9. Building Plans	10. City's Recovery	11. Your Recovery
A1				
A10				
A2		Told not to rebuild		
A3				
A4				
A5				
A6				
A7				
A8				
A9				
B1			Ineffective	
B2				
B3		No		
Gi1				
Hi1	5	No	N/A	from Forest Park lost
Li1	5	No	Master Developer?	Amazed at Volunteers
Ni1	1	N/A	City's efforts were questionable	Depression
Ri1	1	No	Curb Appeal	PTSD w/ thier children
T1	1	N/A	N/A	N/A
T1	5	taken advantage of by contractor	N/A	Insurance didn't cover

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